

October 24, 2011

Ann Boynton
Deputy Executive Officer, Benefit Programs Policy and Planning CalPERS
Lincoln Plaza North
400 Q Street
Sacramento, CA 95811

Subject: Actuarial Valuation of the CalPERS Long-Term Care Program as of June 30, 2011

Dear Ms. Boynton:

We have attached a report summarizing the results of our actuarial valuation of the CalPERS Long-Term Care Program as of June 30, 2011. Please note that this report is not meant to serve as complete actuarial documentation. Much additional relevant data/information is available for distribution and could be provided upon request.

This report is organized as follows:

- The first section presents an executive summary of the valuation results and recommendations.
- The following sections present:
  - o Scope and background information.
  - o The approach used for this valuation.
  - o A discussion of revised assumptions.
  - o Valuation results base case and sensitivity testing.
  - o Observations and Recommendations.
  - o Caveats and/or limitations applicable to this valuation.
  - o Conclusions

Additional details are provided in various attachments as described in the report.

Please feel free to contact us directly to discuss anything presented in this report at the contact information summarized below.

We would like to acknowledge the efforts of our staff members, who assisted us with nearly every aspect of this project:

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Sincerely,

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#### 2011 Actuarial Valuation of the

### California Public Employees' Retirement System

### **Long-Term Care Program**

As of 6/30/2011

Prepared by:

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October 24, 2011

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### I. Executive Summary

United Health Actuarial Services, Inc. (UHAS) was retained by the California Public Employees' Retirement System (CalPERS) Long-Term Care (LTC) Program to perform an annual actuarial valuation of CalPERS LTC operations as of June 30, 2011 ("2011 Annual Valuation"), along with supporting analyses. Specifically, our assignment was to develop a projection of future cash flows and to evaluate the adequacy of current assets and premium levels based on those cash flows. UHAS has completed annual valuations for the CalPERS LTC Program since 2005.

As the starting point for the development of the 2011 Annual Valuation, we utilized our work on the 2010 Annual Valuation along with previous valuations.

Briefly, the 2011 valuation process could be summarized as follows:

- We compared assumptions from the 2010 Annual Valuation to actual experience through 6/30/11 and made appropriate modifications.
- We developed morbidity assumptions that directly incorporate actual experience by calendar year of issue and underwriting type.
- We incorporated, where appropriate, the assumptions utilized to develop the rate increase recommendations approved by the CalPERS Board in December of 2009.
- We utilized projected investment returns from CalPERS investment staff to set the discount rate that reflected the "Portfolio 4" investment mix, which was adopted in May 2011 as an interim portfolio investment strategy.
- We input final assumptions into our model and ran the model for all scenarios to be tested.

Given all of the above, we developed projected values using our proprietary projection model, and we used those projected values along with current Program financial information to determine the projected financial standing of the Program.

While we have always reviewed all of the valuation assumptions annually and developed projection results under a number of different scenarios, we have also highlighted the potential volatility of the Program under different ongoing rate increase and market downturn scenarios in this year's valuation. These will be discussed in more detail later in this report.

Please note that a Glossary of Terms that might be helpful in your review of this report is included in Attachment L.

#### **Projection Results**

Given the range of sensitivity test results presented in this report, projection results are highly dependent on the underlying assumptions.

The results of projection scenario A(1) (i.e., the "base case" scenario) is summarized in Table 1 below. Attachment A and Attachment B provide projection results for various projection scenarios.

| Table 1 Base Case Scenario Summary of Projected Values Inforce Business as of 6/30/2011 Present Values Using Projected Portfolio 4 Returns as the Recommended Discount Rates |                  |  |  |  |  |  |
|--|------------------|--|--|--|--|--|
| Component  | (\$ in Millions) |  |  |  |  |  |
| 1. Present Value of Future Benefits  | \$5,315          |  |  |  |  |  |
| 2. Present Value of Future Expenses  | \$290            |  |  |  |  |  |
| 3. Present Value of Future Premiums (PVFP)   | \$3,029          |  |  |  |  |  |
| 4. Valuation Liabilities (= $3 - 1 - 2$ )  | -\$2,576         |  |  |  |  |  |
| 5. Valuation Assets  | \$3,277          |  |  |  |  |  |
| 6. Valuation Margin/(Deficit) (= 5 + 4)  | \$701            |  |  |  |  |  |
| 7. Margin/(Deficit) as a % of PVFP (= 6 / 3)   | 23.14%           |  |  |  |  |  |

Please note we are recommending a revision to the approved discount rate from 7.79% to "Portfolio 4" rates consistent with recent modifications made to the asset allocation for the LTC Program. The approach utilized to develop the proposed discount rates is consistent with CalPERS Actuarial Office's methodology for determining discount rates from expected returns.

The results shown above reflect our best estimate of the current financial status of the CalPERS LTC Program and, therefore, we recommend that these results be used for financial reporting purposes. Please see the report and attachments for a detailed discussion and summary of projection results.

#### Recommendation

Given the results of this valuation and the supporting analyses and observations, we recommend that CalPERS adopt this 2011 Annual Valuation report including the new portfolio discount rates and all other underlying assumptions. The proposed discount rates are:

- 6.25% for projection years 1 10 (fiscal year starting 7/2011 to fiscal year ending in 6/2021); and,
- 7.60% for projection years 11+ (fiscal year starting 7/2022).

#### II. Scope and Background Information

United Health Actuarial Services, Inc. (UHAS) was retained by the California Public Employees' Retirement System (CalPERS) Long-Term Care (LTC) Program to perform an annual actuarial valuation of CalPERS LTC operations as of June 30, 2011 ("2011 Annual Valuation"), along with supporting analyses. Specifically, our assignment was to develop a projection of future cash flows and to evaluate the adequacy of current assets and premium levels based on those cash flows. UHAS has completed annual valuations for the CalPERS LTC Program since 2005.

#### **Program History - Highlights**

The CalPERS LTC Program ("Program") began accepting members in 1995 and quickly grew to one of the largest LTC blocks in the nation with nearly 200,000 members at its largest. Since its inception, the Program has paid claims to over 13,000 members totaling more than \$862 million through 6/30/11. Future claim payments are funded by members' premiums and the Program's current fund balance, which is nearly \$3.3 billion as of 6/30/11.

Similar to other LTC blocks, the CalPERS LTC Program has experienced the following:

- Worse-than-expected morbidity (i.e., claims), due in part to less stringent underwriting standards in effect during the early years of the Program;
- Higher-than-expected persistency which results in more projected future claims; and,
- Lower-than-expected investment income.

All of these items have negatively impacted the projected funding status of the Program; therefore, similar to the private LTC insurance industry, CalPERS has implemented various corrective actions over time, including increasing the premium rates that members pay. These premium increases were implemented in 2003, 2007, and 2010. The 2010 premium increases were approved by the Board in December 2009, and are summarized below:

- LTC Program premium increases effective on July 1, 2010, for the following:
  - o 22% for members with LTC1 and LTC2 policies and inflation protection;
  - o 22% for members with LTC1 and LTC2 policies and lifetime coverage but without inflation protection; and,
  - o 15% for all other members.
- LTC Program annual premium increases of 5% beginning July 1, 2011 for those members with LTC1 policies with lifetime coverage and inflation protection.

The CalPERS Investment Committee most recently approved the reallocation of the LTC Program's invested assets in May 2011. The impact of this slightly more conservative investment portfolio will be discussed later in this report.

#### **Preview of Report**

This report summarizes the approach, assumptions, and results of our actuarial valuation of the CalPERS Long-Term Care Program as of June 30, 2011. Please note that this report is not meant to serve as complete actuarial documentation for this valuation. Additional data/information could be provided upon request.

#### **III.** Valuation Approach

As the starting point for the development of the 2011 Annual Valuation, we utilized our work on the 2010 Annual Valuation along with the previous valuations that we have completed for CalPERS since 2005.

Briefly, the 2011 Annual Valuation process could be summarized as follows:

- We compared assumptions from the 2010 Annual Valuation to actual experience through 6/30/11 and made appropriate modifications.
- We developed morbidity assumptions that directly incorporate actual experience by calendar year of issue and underwriting type.
- We incorporated, where appropriate, the assumptions utilized to develop the rate increase recommendations approved by the CalPERS Board in December of 2009 (e.g., assumed conversions).
- We utilized projected investment returns from CalPERS investment staff to set the discount rate that reflected the "Portfolio 4" investment mix, which was adopted in May 2011 as an interim portfolio investment strategy.
- We input final assumptions into our model and ran the model for all scenarios to be tested.

Each of these steps is reiterated and discussed in more detail below.

- We compared assumptions from the 2010 Annual Valuation to actual experience through 6/30/11 and made appropriate modifications.
  - We reviewed all the assumptions used in the 2010 Annual Valuation. A discussion of revised assumptions is included later in this report.
- We developed morbidity assumptions that directly incorporate actual experience by calendar year of issue and underwriting type.

For the benefit designs modeled, we performed detailed morbidity experience analyses, and based on the results of those analyses, we were able to make adjustments to the assumed select-and-ultimate claim costs. To determine the appropriate adjustments, we relied upon an updated experience report comparing actual select-and-ultimate Program claim costs to expected select-and-ultimate claim costs. Because of the level of detail included in the study, claims with

incurred dates from 7/1/10 and 6/30/11 were excluded (i.e., those within twelve months of the valuation date). These claims were excluded because over a third of the total number of claims incurred within a given year either are not reported or do not receive a payment as of the end of that year, and an allocation or estimate of these undetermined claims could have distorted the results of our study. For all incurred claims included in this study, we used updated payment data through 6/30/11 and claim reserves calculated as of 6/30/11.

In order to validate these experience-based claim costs, we reworked the actual-to-expected analyses using the newly adjusted experience claim costs as the expected morbidity. In our opinion, the adjusted experience claim costs we developed reasonably reproduce historical experience.

As a final step in developing our morbidity assumptions, we credibility-weighted CalPERS actual experience with industry manual claim costs. This step utilized CalPERS actual experience where credible, manual claims cost where the CalPERS experience was not credible, and combined the two where CalPERS experience was partially credible. The credibility standards we applied were taken from the results of an analysis dated 5/28/03 performed by the Credibility Subgroup of the American Academy of Actuaries Long-Term Care Reserving Work Group.

The development of the claim costs assumption is discussed in greater detail in Attachment C.

• We incorporated, where appropriate, the assumptions utilized to develop the rate increase recommendations approved by the CalPERS Board in December of 2009.

In December of 2009, the CalPERS Board approved the premium rate increases summarized in the Scope and Background Information section. In this valuation, we have included the assumptions utilized to develop the rate increase recommendations, as appropriate. Please note that the premium rate increase recommendations were developed utilizing several assumptions in addition to traditional valuation assumptions including assumed shock lapses, morbidity antiselection, and plan conversions.

Briefly, shock lapses are an insurance phenomenon where individuals allow their policies to lapse/terminate at a higher rate than usual due to a specific event such as a premium rate increase. Individuals who let their policies lapse because of specific events are usually in better health. Policyholders do not normally drop their policies if they anticipate that they will soon have claims. As a result, individuals who retain their policies are often, on average, in worse health than those who lapse them. This policyholder decision process is referred to as antiselection.

Regarding conversions, with the implementation of the premium rate increases, most members were provided an option to either accept the higher premiums, reduce their benefits to offset the rate increase, or select another plan available in the CalPERS LTC Program. The election to switch plans is referred to as a conversion.

• We utilized projected investment returns from CalPERS investment staff to set the discount rate that reflected the "Portfolio 4" investment mix, which was adopted in May 2011 as a short-term portfolio investment strategy.

As part of the CalPERS Asset/Liability workshop held in November 2010, expected investment returns over the next 10 years were derived for each proposed asset allocation based on the input of CalPERS investment staff and various investment consultants. CalPERS actuarial staff also worked closely with CalPERS investment staff to develop an approach that could be used to derive market return assumptions for projection years 11 and beyond. In developing the expected returns for years 11 and beyond, there was a common agreement that expected return for years 11 and beyond should be higher than the expected returns for the next 10 years, but that they should be lower than the historical returns when looking back to the 1920s. Returns for years 11 and beyond were derived by first obtaining the historical geometric returns for each asset classification and then adjusting them to reflect current market conditions.

During the May 2011 Investment Committee meeting, a revised investment portfolio, "Portfolio 4", was adopted for the LTC Program for the next year. The new investment portfolio is made up of the following investment classes.

| TIPS:                      | 15%  |
|----------------------------|------|
| US Nominal Bonds:          | 30%  |
| Global Equity:             | 44%  |
| Global Public Real Estate: | 8%   |
| Commodities:               | 3%   |
| Total                      | 100% |

The proposed discount rates for the LTC Program have been developed from the above and rely on the CalPERS Actuarial Office's methodology utilized for the Pension Program(s); therefore, the following differences between CalPERS LTC Program and Pension programs are worth noting:

- 1. The LTC Program has a different proposed asset mix as shown above.
- 2. The LTC Program uses best-estimate (i.e., 50<sup>th</sup> percentile) returns for the discount rate and does not include provision for expenses or any margin in this rate. The LTC Program margin is explicitly provided for elsewhere.
- 3. The LTC Program is able to utilize a select-and-ultimate discount rate structure rather than develop one level discount rate required in the Pension valuations.

The CalPERS LTC Program proposed discount rates are based on the results of CalPERS Asset/Liability Workshop referenced above, and take into account the three differences listed above. The proposed discount rates for the LTC Program for this 2011 Annual Valuation are:

- o 6.25% for projection years 1 10 (fiscal year starting 7/2011 to fiscal year ending in 6/2021); and,
- o 7.60% for projection years 11+ (fiscal year starting 7/2022).
- We input final assumptions into our model and ran the model for all scenarios to be tested.

Results of the "base case" scenario to be used for financial reporting purposes along with results from other sensitivity tests are discussed later in this report.

### IV. Liability Assumptions

This section presents data/information relating to assumption revisions made to the 2011 valuation as compared to the 2010 valuation. The impacts of these assumption changes are shown later in the section entitled "Reconciliation of Base Case Valuation Results..." Assumptions are documented in more detail in Attachment C.

#### **Fund Balance**

Please see Attachment D for a summary of actual-to-projected values for the period 7/2010-6/2011. The actual fund balance as of 6/30/11 compares favorably to the corresponding projected fund balance from the 2010 Annual Valuation. The source of this positive result is the actual (vs. projected at 6.38%) investment income, which was 213% greater than expected. Actual claims and expenses were higher than expected by 1% and 19%, respectively, and premiums were lower than expected by 4% thus, in combination, offsetting a small portion of the better-than-expected investment income. The valuation assumptions have been updated in such a way that they address the differences discussed in this section.

Please note that although the expenses were 19% higher than projected in the 2010 Annual Valuation, the 19% variation equates to \$3.3 million, which is a small variation when considering the relative size of the fund balance and other factors that impact the balance. At least part of the variation in expenses is that the 2010 Annual Valuation expense assumptions did not account for the additional costs to implement the premium rate increases; however, these additional expenses are not expected to continue at this higher level into the future.

#### **Morbidity**

The morbidity assumptions are briefly discussed earlier in this document, and in greater detail in Attachment C.

Please note that this valuation is based on assumed morbidity more favorable than actual Program experience. If actual experience continues to emerge as it has to date, valuation results would deteriorate (e.g., a projected margin would decrease) as the credibility attributable to that experience increases. However, as the Program continues to mature, the difference between actual Program experience and assumed morbidity is decreasing, so the resulting potential deterioration of results is lessening as compared to previous valuations.

#### **Total Terminations - Voluntary Lapsation and Mortality**

We utilized the mortality assumptions developed in the 2009 valuation, which were based on a detailed analysis of actual Program experience utilizing the Social Security Database, and we revised the voluntary lapse assumptions for this valuation given the additional year of total termination experience.

Please note that actual voluntary lapse rates for the CalPERS LTC Program continue to be much lower than those experienced in the LTC insurance industry as a whole.

#### **Expenses**

Assumed expenses were adjusted to reflect both actual and anticipated changes in expense patterns. The aggregate increase made only a small impact to the valuation results.

#### **Other Assumptions**

All other assumptions are substantially similar to those utilized in the 2010 Annual Valuation.

#### V. Valuation Results

Given everything presented above, we developed projected values using a proprietary projection model. The projection results were fit to historical experience such that projected lives inforce, premiums collected and claims incurred were all consistent with recent historical values. With respect to incurred claims, we adjusted values to reflect past over-estimates of open claim reserves in early claim durations and in incurred-but-not-reported claims. We also developed and applied additional adjustments to fit historical claims experience to projected claims.

This section summarizes the results of our actuarial valuation of the CalPERS Program for 2011. Please note that this report is not meant to serve as complete actuarial documentation for this valuation. Additional data/information could be provided upon request.

#### **Projection Results**

The "base case" projection results are summarized in Attachment A(1), where all assumptions are set at "best estimates". Included in these best-estimate assumptions are

the Portfolio 4-based discount rates described in Section III. Also included in these bestestimate assumptions are the ongoing premium increases for all future years for certain classes of policies, and all corresponding additional lapses, anti-selection, and conversions assumed in conjunction with those ongoing increases. A variety of sensitivity-test results are included below, including those that illustrate the impact of stopping the ongoing rate increase at various points in time.

We did not attempt to include new business or increases in future benefits from BIOs (Benefit Increase Options) in this valuation – only members and benefits inforce as of 6/30/11 were included.

#### "Base Case" Results

With all of the updated assumptions and inforce data, the projected margin for the "base case" scenario is 23.14%. As a reminder, the 2010 Annual Valuation reported the "base case" deficit as (2.98%); however, the 2010 deficit calculation was developed using a level 6.38% discount rate. This discount rate was based on the best information available when developing that valuation, but CalPERS was still in the process of developing their long-term investment return outlook at that time. Given all of the above, we will revert back to the Board-approved discount rate of 7.79% as the starting point for the 2011 Annual Valuation. The 2010 Annual Valuation projected margin was 24.25% using a level 7.79% discount rate.

#### **Financial Status Measurements**

The Program results summarized throughout this section either refer to "deficits" or "margins". A deficit is an estimate of what level of one-time rate increase would be needed to bring the Program back to a zero margin. If the current fund balance and present value of earnings are adequate, a positive number or a "margin" would result. In formula terms:

Margin / (Deficit): {Current Fund Balance + Present Value of Earnings}
Present Value of Premiums

Where:

Present Value of Earnings: Present Value of Net Premiums
- Present Value of Benefits and Expenses

New for this valuation, we have included a second method of expressing the current financial status of the Program called a "Funded Ratio", which is consistent with the CalPERS pension and health plan financial status measurements. In general, the funded ratio is the Program assets divided by the accrued liability, or reserves. For the LTC Program, the accrued liability is equal to the present value of future benefits and expenses less the present value of member premiums. This definition is consistent with a statutory gross premium valuation reserve for LTC insurance. In this context, a breakeven position is a funded ratio of 100%. The LTC Program's funded ratio uses the following formula:

#### LTC Program Funded Ratio:

#### **Fund Balance**

#### {Present Value of Benefits and Expenses – Present Value of Premiums}

These two methods of expressing the status of the LTC Program are consistent in that both will always produce a margin when the funded ratio is greater than 100% and will always produce a deficit when the funded ratio is lower than 100%. They are not consistent in that a 10% margin for example does not produce a 110% funded ratio.

#### **Considerations**

Three items to note when reviewing these (and future) valuation projection results:

- Please remember that the results are very sensitive to the assumptions used.
- Along the same line, please remember that assumption changes produce leveraged results. In other words, if an assumption is revised (for example) such that the initial pricing for a product should have been 10% greater, that would increase the projected deficit as of 6/30/11 by approximately 20%.
- All of the results presented in this report assume that the target is a 0% deficit (i.e., break-even); however, a target margin of 10% after 10 years was associated with the rate increase analyses completed in 2009. In order to reflect this, the projected margin/(deficit) results should be compared to the appropriate target margin to ensure the appropriate interpretation of valuation results.

#### **Sensitivity/Scenario Test Results**

The Program's projected financial standing is highly sensitive to the underlying assumptions, so we developed a number of sensitivity tests for review and consideration. The following outlines the sensitivity test scenarios associated with the projection results summarized in Attachments A(2) through A(11). Please note that scenarios A(2) and A(6) include the discount rate of 7.79% utilized in the "base case" scenarios for the 2005 - 2009 Annual Valuations. Also note that Attachments A(7) and A(10) utilize a representative LTC industry portfolio discount rate of 5.50%.

Attachment A(2) - Discount rate changed to 7.79%.

Attachment A(3) - LTC base policy claims reduced by 10%.

Attachment A(4) - Model expenses reduced by 20%. Attachment A(5) - Model lapses increased by .25%.

Attachment A(6) - Discount rate changed to 7.79%, LTC base policy claims reduced by 10%, model expenses reduced by 20%, and model lapses

increased by .25%.

Attachment A(7) - Discount rate changed to a representative industry rate of 5.50%.

Attachment A(8) - LTC base policy claims increased by 10%.

Attachment A(9) - Model expenses increased by 20%. Attachment A(10) - Model lapses decreased by .25%.

Attachment A(11) - Discount rate changed to 5.50%, LTC base policy claims increased by 10%, model expenses increased by 20%, and model lapses decreased by .25%.

In addition to the above scenarios, we included two more sensitivity tests that focus on morbidity and mortality improvement. As documented in Attachment C, morbidity and mortality improvements have been assumed to occur for the first 20 years after the valuation date. These two additional sensitivity tests were added to address comments received during CalPERS external auditors' review of last year's valuation report.

Attachment A(12) – Morbidity and mortality improvement assumed to end in 19 years instead of 20 years.

Attachment A(13) - All morbidity and mortality improvements removed from projection.

A brief summary of projection results using the above sensitivity tests is included below:

|          | Table 2 2011 Annual Valuation Results and Sensitivities |                 |                                |                          |   |                           |  |  |  |  |
|----------|---|-----------------|--------------------------------|--------------------------|---|---------------------------|--|--|--|--|
| Scenario | Margin/<br>(Deficit)                                    | Funded<br>Ratio | LTC<br>Claim Adj.              | Model<br>Expense<br>Adj. | Model<br>Lapse Adj.<br>(all years)      | Discount Rate             |  |  |  |  |
| A(1)     | 23.14%  | 127%            | 0%                             | 0%                       | None                                    | 6.25% 1 – 10<br>7.60% 11+ |  |  |  |  |
| A(2)     | 40.34%  | 152%            | 0%                             | 0%                       | None                                    | Level 7.79%               |  |  |  |  |
| A(3)     | 40.49%  | 160%            | -10%                           | 0%                       | None                                    | 6.25% 1 – 10<br>7.60% 11+ |  |  |  |  |
| A(4)     | 24.80%  | 130%            | 0%                             | -20%                     | None                                    | 6.25% 1 – 10<br>7.60% 11+ |  |  |  |  |
| A(5)     | 27.11%  | 133%            | 0%                             | 0%                       | +.25%                                   | 6.25% 1 – 10<br>7.60% 11+ |  |  |  |  |
| A(6)     | 62.36%  | 208%            | -10%                           | -20%                     | +.25%                                   | Level 7.79%               |  |  |  |  |
| A(7)     | (10.25%)  | 91%             | 0%                             | 0%                       | None                                    | Level 5.50%               |  |  |  |  |
| A(8)     | 5.78%   | 106%            | +10%                           | 0%                       | None                                    | 6.25% 1 – 10<br>7.60% 11+ |  |  |  |  |
| A(9)     | 21.47%  | 125%            | 0%                             | +20%                     | None                                    | 6.25% 1 – 10<br>7.60% 11+ |  |  |  |  |
| A(10)    | 19.10%  | 122%            | 0%                             | 0%                       | 25%                                     | 6.25% 1 – 10<br>7.60% 11+ |  |  |  |  |
| A(11)    | (37.04%)  | 73%             | +10%                           | +20%                     | 25%                                     | Level 5.50%               |  |  |  |  |
| A(12)    | 22.82%  | 127%            | 19 years of claims improvement | 0%                       | 19 years of<br>mortality<br>improvement | 6.25% 1 – 10<br>7.60% 11+ |  |  |  |  |
| A(13)    | 7.75%   | 108%            | No claims improvement          | 0%                       | No mortality improvement                | 6.25% 1 – 10<br>7.60% 11+ |  |  |  |  |

In addition to the sensitivity testing summarized above, we tested more robust investment scenarios on the "base case" scenario using the following interest rate scenarios:

Scenario #1: No deviation.

Scenario #2: Uniformly adding to the "base case" investment scenario one-half percent per year for ten years and then continuing at a level five percent higher than the "base case" investment scenario for all future projected years.

Scenario #3: Uniformly adding to the "base case" investment scenario one percent per year for five years, and then uniformly subtracting one percent per year for five years to the original "base case" investment scenario, and then continuing the "base case" investment scenario beyond ten years.

Scenario #4: Adding an immediate three percent to the "base case" investment scenario and continuing this additional three percent for all future projection years.

Scenario #5: Uniformly subtracting from the "base case" investment scenario one-half percent per year for ten years and then continuing at a level five percent lower than the "base case" investment scenario for all future projection years.

Scenario #6: Uniformly subtracting from the "base case" investment scenario one percent per year for five years, and then uniformly adding one percent per year for five years to the original "base case" investment scenario, and then continuing the "base case" investment scenario beyond ten years.

Scenario #7: Subtracting an immediate three percent from the "base case" investment scenario and continuing this three percent reduction for all future projection years.

The numeric descriptions of the above scenarios are shown in Table 3 below.

|             | Table 3 Investment Sensitivities |                  |       |       |        |        |        |       |        |        |        |
|-------------|----------------------------------|------------------|-------|-------|--------|--------|--------|-------|--------|--------|--------|
|             |                                  | Projection Years |       |       |        |        |        |       |        |        |        |
|             | 1                                | 2                | 3     | 4     | 5      | 6      | 7      | 8     | 9      | 10     | 11+    |
| Scenario #1 | 6.25%                            | 6.25%            | 6.25% | 6.25% | 6.25%  | 6.25%  | 6.25%  | 6.25% | 6.25%  | 6.25%  | 7.60%  |
| Scenario #2 | 6.25%                            | 6.75%            | 7.25% | 7.75% | 8.25%  | 8.75%  | 9.25%  | 9.75% | 10.25% | 10.75% | 12.60% |
| Scenario #3 | 6.25%                            | 7.25%            | 8.25% | 9.25% | 10.25% | 11.25% | 10.25% | 9.25% | 8.25%  | 7.25%  | 7.60%  |
| Scenario #4 | 9.25%                            | 9.25%            | 9.25% | 9.25% | 9.25%  | 9.25%  | 9.25%  | 9.25% | 9.25%  | 9.25%  | 10.60% |
| Scenario #5 | 6.25%                            | 5.75%            | 5.25% | 4.75% | 4.25%  | 3.75%  | 3.25%  | 2.75% | 2.25%  | 1.75%  | 2.60%  |
| Scenario #6 | 6.25%                            | 5.25%            | 4.25% | 3.25% | 2.25%  | 1.25%  | 2.25%  | 3.25% | 4.25%  | 5.25%  | 7.60%  |
| Scenario #7 | 3.25%                            | 3.25%            | 3.25% | 3.25% | 3.25%  | 3.25%  | 3.25%  | 3.25% | 3.25%  | 3.25%  | 4.60%  |

Summaries of these additional investment sensitivity test results are included as Attachments B(1)-B(7). A brief summary of those results is included in Table 4 below:

| Table 4 Investment Sensitivities |   |       |       |         |            |             |  |  |  |  |  |
|----------------------------------|---|-------|-------|---------|------------|-------------|--|--|--|--|--|
| Scenario                         | Scenario Margin/ Funded LTC Model Model Discount Ra |       |       |         |            |             |  |  |  |  |  |
|                                  | (Deficit)   | Ratio | Claim | Expense | Lapse Adj. |             |  |  |  |  |  |
|                                  | Adj. Adj. (all years)                               |       |       |         |            |             |  |  |  |  |  |
| B(1)                             | 23.14%  | 127%  | 0%    | 0%      | None       | Scenario #1 |  |  |  |  |  |
| B(2)                             | 79.13%  | 270%  | 0%    | 0%      | None       | Scenario #2 |  |  |  |  |  |
| B(3)                             | 47.72%  | 164%  | 0%    | 0%      | None       | Scenario #3 |  |  |  |  |  |
| B(4)                             | 76.98%  | 241%  | 0%    | 0%      | None       | Scenario #4 |  |  |  |  |  |
| B(5)                             | (82.55%)  | 51%   | 0%    | 0%      | None       | Scenario #5 |  |  |  |  |  |
| B(6)                             | (1.61%)   | 98%   | 0%    | 0%      | None       | Scenario #6 |  |  |  |  |  |
| B(7)                             | (47.87%)  | 64%   | 0%    | 0%      | None       | Scenario #7 |  |  |  |  |  |

As noted earlier, the previous results include ongoing rate increases that continue for all future years; however, sensitivity test results assuming that the ongoing rate increases end at 2014 as well as when the Program is projected to maintain a10% margin are summarized in Table 5 below.

| Table 5 On-going Premium Increase Scenarios |   |       |  |  |  |  |  |  |
|---|---|-------|--|--|--|--|--|--|
| Ongoing Premium                             | Ongoing Premium Margin / (Deficit) Funded Ratio |       |  |  |  |  |  |  |
| Rate Increases                              |   |       |  |  |  |  |  |  |
| Continue                                    | 23.14%  | 127%  |  |  |  |  |  |  |
| (Base Case)                                 | 25.17/0   | 127/0 |  |  |  |  |  |  |
| Last Increase                               | 7.51%   | 107%  |  |  |  |  |  |  |
| 7/2014                                      | 7.5170  | 10770 |  |  |  |  |  |  |
| Last Increase                               | 11.35%  | 111%  |  |  |  |  |  |  |
| 7/2016                                      | 11.55/0   | 111/0 |  |  |  |  |  |  |

#### **Volatility of Results**

The volatility of projection results has been demonstrated using various sensitivity tests and, in this section, we demonstrate the volatility of results if another market downturn would occur next year, five years in the future or ten years in the future. A market downturn example was developed for the May 2011 Investment Committee meeting where assumed market downturns were determined for various portfolios given their asset allocations and historical market downturn data.

For the Portfolio 4 asset mix, the average downturn over the past three market downturns was a negative 18% return. Assuming the next market downturn consistent with this average negative return occurs at various points in the future, the following rate increases would be needed to bring the Program back to the position it was before the assumed downturn. For this scenario testing, we used the "base case" assumptions; however, we stopped the assumed ongoing rate increase at 2016, which is consistent with the Table 5 results above where the margin of 10% was maintained under this scenario. The purpose of using this scenario with the ongoing rate increases stopped (instead of the "base case" scenario) is to utilize a scenario that has a margin close to the target margin identified in the previous rate increase analysis.

| Table 6<br>Market Downturn Scenario (18% Loss)                            |      |  |  |
|---|------|--|--|
| Projection Year Premium Rate Increase 1-year af Downturn to Offset Impact |      |  |  |
| 1 Year  | 34%  |  |  |
| 5 Years   | 64%  |  |  |
| 10 Years  | 164% |  |  |

The purpose of this testing is to illustrate the greater dependency of the Program on investment returns over time and to show that future rate increases would need be larger for the same negative return in the future.

#### Reconciliation of Base Case Valuation Results - 2010 to 2011

The 2010 Annual Valuation reported the "base case" deficit as (2.98%); however, the 2010 deficit calculation was developed using a level 6.38% discount rate. This discount rate was based on the best information available when developing that valuation, but CalPERS was still in the process of developing their long-term investment return outlook at that time. Given all the above, we will revert back to the Board-approved discount rate of 7.79% as the starting point for the 2011 Annual Valuation.

The reconciliation of these margins (in millions) can be broken down as follows:

| Table 7 Reconciliation of Base Case Valuation Results in Millions                            |                              |                              |  |  |  |  |  |
|--|------------------------------|------------------------------|--|--|--|--|--|
| <b>Projection Model Revisions</b>  | Starting Discount Rate 6.38% | Starting Discount Rate 7.79% |  |  |  |  |  |
| 2010 aggregate present-value margin/(deficit) as of 6/30/10:                                 | (\$93.3)                     | \$687.6                      |  |  |  |  |  |
| Adjusted to 6/30/11 (i.e., lost time):   |                              | +\$54.1                      |  |  |  |  |  |
| Updated Inforce:   |                              | -\$168.5                     |  |  |  |  |  |
| Favorable FY 2010-2011 experience (esp. investments):  |                              | +\$349.4                     |  |  |  |  |  |
| Revised assumed lapsation and mortality:   |                              | +\$24.6                      |  |  |  |  |  |
| Revised assumed expenses:  |                              | -\$2.7                       |  |  |  |  |  |
| Revised morbidity and mortality claims-related assumptions:                                  |                              | +\$180.0                     |  |  |  |  |  |
| Revised discount rate from 7.79% to 6.25% for projection years 1-10 and 7.60% for years 11+. |                              | -\$423.7                     |  |  |  |  |  |
| 2011 aggregate present-value margin/(deficit) as of 6/30/11:                                 |                              | \$700.7                      |  |  |  |  |  |

The reconciliation of these margins (as a percent of present-value of premiums) can be broken down as follows:

| Table 8  |                              |                              |
|--|------------------------------|------------------------------|
| Reconciliation of Base Case Valuation Results a  | as a Present-Valu            | e of Premiums                |
| Projection Model Revisions   | Starting Discount Rate 6.38% | Starting Discount Rate 7.79% |
| 2010 aggregate present-value margin/(deficit) as of 6/30/10:                                 | (2.98%)                      | 24.25%                       |
| Adjusted to 6/30/11 (i.e., lost time):   |                              | +3.1%                        |
| Updated Inforce:   |                              | -6.7%                        |
| Favorable FY 2010-2011 experience (esp.  |                              | +12.6%                       |
| investments):  |                              |                              |
| Revised assumed lapsation and mortality:   |                              | +1.0%                        |
| Revised assumed expenses:  |                              | -0.1%                        |
| Revised morbidity and mortality claims-related assumptions:                                  |                              | +6.3%                        |
| Revised discount rate from 7.79% to 6.25% for projection years 1-10 and 7.60% for years 11+. |                              | -17.3%                       |
| 2011 aggregate present-value margin/(deficit) as of 6/30/11:                                 |                              | 23.14%                       |

The major driving factor that reduced the projected margin is the decline in discount rate from the 2010 discount rate of 7.79% to this year's discount rate of 6.25% for Projection years 1-10 and 7.60% for years 11+. Offsetting the discount rate change that reduced the projected margin is the larger-than-expected fund balance resulting from better investment returns experienced since the 2010 Annual Valuation and the improvement in projected future benefits.

A discussion of assumption revisions is included in an earlier section of this report and in Attachment C.

#### **Additional Perspectives on Projection Results**

The purpose of this section is to provide additional perspectives and data/information relating to the 2011 Annual Valuation results. The following items, in no particular order, are presented with this purpose in mind:

• Attachment G is identical to Attachments A(1) and B(1) – the "base case" scenario with the recommended Portfolio 4 discount rate and assuming all ongoing premium rate increases and corresponding assumptions. In this scenario, as indicated earlier in this report regarding morbidity assumption development, actual Program claim costs were credibility-weighted with corresponding industry manual claim costs to develop assumed claim costs. The credibility standards we applied assume that "full credibility" is defined such that there is a 90% probability that estimates fall within 10% of expected claim costs. The purpose of setting the credibility standards as defined here was to attribute as much credibility to actual Program experience as we could reasonably justify given that we thought actual experience might differ significantly from industry manual experience.

We reviewed alternative projection scenarios using differing credibility standards:

- Attachment H summarizes projection results assuming that no credibility can be attributed to actual Program experience.
  - Essentially, this attachment summarizes results assuming that this Program experiences what would be considered industry-average experience. As you can see, the projected margin in this scenario is 28.77% with a funded ratio of 136%.
  - Given that assumption changes produce leveraged results as described earlier, the difference between the "base case" projected deficit and the projected deficit shown immediately above indicate that, on average, assumed morbidity is approximately 3% greater than manual (i.e., LTC industry) morbidity.
- o Attachment I summarizes projection results assuming full credibility can be attributed to actual Program experience.
  - As you would expect, the projection results for this scenario are worse than those summarized in Attachments H. The projected margin in this scenario is 19.70%

with a funded ratio of 122%. For this scenario, we have determined that CalPERS morbidity experience is 5% higher than manual/industry experience and 2% greater than the morbidity assumed in the "base case".

• Attachment J summarizes a variety of inception-to-date statistics from the Program. All claims-related statistics are increasing year after year, and we would expect this trend to continue given the increasing age of the inforce block of business. As a result, if you look at the "base case" projection (i.e., Attachments A(1), B(1), or G), projected cash flows excluding investment income turn negative in 2016 and continue that way for the remainder of the projection. If this is correct, then clearly the weight of the funding burden in the future will continue to shift toward investment income (i.e., the size of the fund balance and the return(s) achieved on that balance).

We would be happy to elaborate further on any data/information presented in this section or to discuss or present any additional data/information that might help everyone involved to better understand and interpret the valuation results.

#### VI. Observations and Recommendation

We have completed an annual valuation for the CalPERS LTC Program since 2005, and this is therefore the seventh annual valuation we have completed. Combining this historical knowledge of the Program and our industry knowledge, we have the following observations regarding the 2011 Annual Valuation:

- The results of this annual valuation are consistent with recent quarterly valuations that utilized the recommended Portfolio 4 discount rates with the exception that the ongoing rate increases could stop earlier than previously reported and still maintain a 10% margin.
- The Program's financial status continues to improve due to better-than-projected investment returns over the last 2 years.
- The liability assumptions, including morbidity and persistency, have become more stable, and the smaller fluctuations in assumptions translate to less volatile results.
- As noted previously, the range between manual claim costs and actual experience claim costs has narrowed as the block continues to mature, so the Program will see less deterioration from increased credibility in experience.
- The recent volatility in the asset markets continues to cause the larger fluctuations in results, and this will have a greater impact in the future as the primary source of Program revenue gradually shifts from premiums to investment returns.
- Variability in future results is expected, and the impact to the Program can be lessened with risk adjusted margins, which increase or decrease the target margin based on the underlying risk in the Program. This approach is consistent with the private sector statutory requirements.
- The continued quarterly monitoring and reporting of actual-versus-projected experience helps identify emerging issues.

- Conversion and downgrade activity continues to help the status of the program, and continued, improved efforts in that regard would lead to even better results.
- The following comments are related to the two charts in Attachment K where we summarize historical and projected cash flows. We show two scenarios the "base case" scenario and the scenario that stops the ongoing rate increase at 2016 summarized in Table 5 to demonstrate the difference in investment income. Please note that the premium and investment income line (blue/top line) in both charts are stopped earlier than the other cash flows because a Program that has a margin starts to have significant investment returns in these later projection years. These large investment incomes distort the chart, and the Program would likely be managed in such a way that large margins would be reduced in the later durations.
  - o The historic revenues (premiums and investment income) have wide variations in results due to investment income fluctuations (i.e., the difference between the blue/top line and the green/bottom line).
  - o Expenses in the Program have been and are expected to be a small relative to the overall cash flows. Expenses are shown in the chart as purple or the small box on the top of each bar.
  - O Although a sizable amount of claims have been paid to members thus far, this represents only a small fraction to the total claims that will be paid in total. Paid claims are represented in the chart as the large bars and those occurring prior to 2011 are historical paid claims that total over \$862 million.

Given the results of this valuation and the supporting analyses and observations, we recommend that CalPERS adopt this 2011 Annual Valuation report including the new portfolio discount rates and all other underlying assumptions.

#### VII. Caveats and Limitations

Please note the following caveats and limitations with respect this valuation and this report:

- UHAS has performed the work assigned and prepared this report assuming it will be utilized by persons technically competent in the areas addressed and for the stated purpose. Judgments should be made only after studying this report in its entirety. We are available to explain and/or amplify anything presented in this report, and it is assumed that the user of this report will seek such explanation and/or amplification regarding any matter in question.
- Nothing included in this report is to be used in any filings with any public body such as the Securities and Exchange Commission or State Insurance Departments, without prior written approval from UHAS. Any distribution of this report must be in its entirety.

- We relied on data and information supplied by CalPERS and Univita data services personnel. We have not audited or independently verified the information furnished to us. Although we have no reason to suspect the integrity of the underlying data, to the extent that the data are materially flawed, the results of our analysis may be materially impacted. The principal items/materials relied upon include:
  - O Data extracts from Univita's administrative system.
  - O Direction from Univita actuarial personnel regarding the appropriate interpretation and processing of the data provided.
  - o Information contained in previous valuation reports and associated correspondence and documentation.
  - o Financial information for the Program from inception through 6/30/11.
  - o Information/analyses/summaries/etc. provided by CalPERS staff and Univita.
- The assumptions underlying the projection results summarized in this document and attachments are based on Program data and experience, industry data and experience, discussions with Program management, and informed judgment. We believe the assumptions used are reasonable in the aggregate based on the data/information we have and based on our experience; however, future experience will invariably be different from the projected experience, and other knowledgeable individuals could have different opinions about the appropriateness of any or all of the assumptions used.
- The validity of these projections depends on how actual future experience compares to the valuation assumptions. Assumptions for future morbidity, persistency, expenses, investment return, and other factors are based upon our evaluation of recent experience and anticipated future trends. Actual experience could be more or less favorable. To the extent that actual experience differs from the assumptions underlying this report, actual results will differ from the projection results presented in this report.
- In preparing this report, we have complied with all relevant Actuarial Standards of Practice and any other relevant documents published by the American Academy of Actuaries.
- As indicated previously, this report is not meant to serve as complete actuarial documentation. Much additional relevant data/information is available for distribution and can be provided upon request.

### VIII. Qualifications

We, Karl Volkmar and Clark Heitkamp, are associated with United Health Actuarial Services, Inc. and are members of the American Academy of Actuaries. We are qualified under the Academy's Qualification Standards to render the opinions with regard to the actuarial summaries set forth herein.

As indicated previously, please feel free to contact us with any questions at:

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- Karl G. Volkmar: (317) 575-7672 or via e-mail at kvolkmar@uhasinc.com.

# Attachment A

## **Attachment A Summary**

| Attachment A(1) –  | Margin 23.14% and Funded Ratio 127%<br>"Base Case" Scenario   |
|--------------------|---|
| Attachment A(2) –  | Margin 40.34% and Funded Ratio 152%<br>Discount rate level 7.79%, (i.e. former valuation discount rate)                   |
| Attachment A(3) –  | Margin 40.49% and Funded Ratio 160%<br>Base policy claims reduced 10%   |
| Attachment A(4) –  | Margin 24.80% and Funded Ratio 130%<br>Modeled expenses reduced 20%   |
| Attachment A(5) –  | Margin 27.11% and Funded Ratio 133%<br>Modeled lapses increased by .25%   |
| Attachment A(6) –  | Margin 62.36% and Funded Ratio 208%<br>Sensitivity tests A(2), A(3), A(4), and A(5) combined                              |
| Attachment A(7) –  | Deficit (10.25%) and Funded Ratio 91%<br>Discount rate level 5.50%, (i.e. representative industry rate)                   |
| Attachment A(8) –  | Margin 5.78% and Funded Ratio 106%<br>Base policy claims increased 10%  |
| Attachment A(9) –  | Margin 21.47% and Funded Ratio 125%<br>Modeled expenses increased 20%   |
| Attachment A(10) - | - Margin 19.10% and Funded Ratio 122%<br>Modeled lapses decreased by .25%   |
| Attachment A(11) - | Deficit (37.04%) and Funded Ratio 73%<br>Sensitivity tests A(7), A(8), A(9), and A(10) combined                           |
| Attachment A(12) - | - Margin 22.82% and Funded Ratio 127% Claims and mortality improvement reduced from 20 years to instead the next 19 years |
| Attachment A(13) - | - Margin 7.75% and Funded Ratio 108% Removed claims and mortality improvement   |

### Attachment A(1) Base Case

#### **California Public Employees Retirement System**

Summary of Projected Values
All Plans

Discount Rate Years 1 - 10: 6.25% LTC Program Funded Ratio: 127.20% Discount Rate Years 11+: 7.60% Surplus/(Deficit) \$ = PV (Fund Balance + Earnings): 700,742,636 = Standard Program Definition Surplus/(Deficit) \$ as a Percentage of PV(Premiums) 23.14% = Standard Program Definition Fund Balance @ Fnd of Projection: 49.493.046.394 100.00% 100.00% Totals - 7/2011 thru 6/2071: 5.545.681.269 19.529.919.673 90.896.489 750.438.987 (14.825.573.880) 61,041,835,453 As a % of Premiums: 100.00% 352.16% 1.64% 13.53% -267.34% 1100.71% Totals - Present Values: 3,028,780,651 5,256,373,930 58,838,801 289,610,105 (2,576,042,185) 7,013,761,458 As a % of PV(Premiums): 100.00% 173.55% 1.94% 9.56% -85.05% 231.57% Months Year Lives Total Premiums LTC Paid Claims RoP Claims Total Expenses **Earnings** Investment Earnings Fund Balance 3.276.784.822 7-12 2011 163,214,995 86,518,260 3,387,165 8,981,681 64,327,889 102,145,483 3,443,258,194 152,290 1-12 2012 147,709 319,059,141 189,064,343 6,895,002 18,148,098 104,951,698 219,154,237 3,767,364,129 143,043 310,506,451 213,621,901 7,167,348 18,746,908 70,970,294 238,408,258 4,076,742,681 1-12 2013 1-12 2014 138,324 301,716,982 235,804,779 7,218,240 19,383,443 39,310,519 256,670,452 4,372,723,653 1-12 2015 133.569 292.812.777 252,377,141 6,975,166 20,045,063 13,415,407 274.366.302 4.660.505.363 (15 217 569) 291 470 022 4 936 757 816 1-12 2016 128 772 283.662.504 271.464.517 6.685.429 20 730 126 6.346.259 21.274.336 (44.805.099) 307.796.860 2017 123.912 274.128.945 291.313.450 5.199.749.577 1-12 309,404,757 1-12 2018 118,985 264,230,361 5,893,779 21,763,059 (72,831,233) 323,339,651 5,450,257,995 1-12 2019 114.031 254.007.602 326,727,442 5.344.120 22,208,604 (100,272,564) 338,139,143 5,688,124,575 243,443,552 343,459,398 4,812,904 22,630,437 (127,459,187) 352,116,421 5,912,781,808 1-12 2020 109,076 1-12 2021 104.128 232.599.901 357,608,875 4,330,873 23,046,183 (152.386.030) 404.448.471 6,164,844,249 1-12 2022 99,172 221,541,618 373,880,074 3,887,360 23,412,613 (179,638,430) 462,466,712 6,447,672,531 1-12 2023 94.202 210.311.139 393.964.804 3.405.930 23.700.092 (210.759.687) 482.785.786 6.719.698.630 (241,932,180) 414.108.559 6.980.031.740 199.001.068 2.918.933 23.905.755 502.265.290 1-12 2024 89.249 (274,541,782) 84,345 187,658,130 435,644,456 2,507,685 24,047,771 1-12 2025 520,822,194 7,226,312,152 1-12 2026 79.502 176,331,779 459,722,190 2,180,288 24,141,270 (309,711,968) 538,211,128 7,454,811,312 165,080,604 483,751,478 24,152,780 (344,729,982) 554,228,751 7,664,310,081 1-12 2027 74,710 1,906,328 2028 69,968 153,956,756 504,626,657 1,631,506 24,045,434 (376,346,841) 568,915,249 7,856,878,488 1-12 1-12 2029 65,294 142,987,659 521,966,548 1,364,822 23,812,655 (404,156,366) 582.462.629 8,035,184,752 1-12 2030 60.718 132.203.311 539 004 799 1.135.750 23,470,506 (431 407 744) 594 973 543 8.198.750.550 1-12 2031 56.254 121.641.574 558.280.229 951,176 23.058.064 (460.647.895) 606.305.326 8.344.407.981 111,327,765 51,885 577,770,778 815,223 22,660,699 (489,918,935) 616,227,053 8,470,716,099 1-12 2032 1-12 2033 47,618 101,314,984 591,395,682 685,794 22,142,029 (512,908,521) 624,901,005 8,582,708,583 1-12 2034 43,471 91,646,420 599,727,318 556,720 21,476,888 (530,114,506) 632,711,914 8,685,305,991 39,474 20,682,434 8,779,826,349 1-12 2035 82,340,290 606,614,417 435,286 (545,391,847) 639,912,205 1-12 2036 35,657 73,479,687 614,058,683 337,397 19,792,076 (560,708,468) 646,498,471 8,865,616,351 1-12 2037 32.030 65,124,492 618,983,471 268,664 18.825.823 (572.953.466) 652.506.608 8,945,169,493 9.027,321,753 1-12 2038 28.595 57.322.422 615.518.913 214.154 17,781,528 (576, 192, 173) 658.344.433 603,959,865 165,968 (570,690,864) 1-12 2039 25,365 50,086,087 16,651,118 664,731,524 9,121,362,413 43,432,755 589,474,789 15,462,962 (561,628,596) 2040 22.364 123,600 672.192.687 9.231.926.503 1-12 1-12 2041 19,607 37,389,850 574,966,945 89,744 14,265,872 (551,932,712) 680,940,666 9,360,934,457 1-12 2042 17.091 31.962.611 557,053,936 65.926 13,093,630 (538,250,881) 691,207,641 9,513,891,218 1-12 2043 14,806 27,134,548 531,609,781 50,599 11,943,747 (516,469,579) 703,582,502 9,701,004,140 1-12 2044 12.745 22,874,351 500.375.134 38.684 10.805.046 (488,344,513) 718.819.416 9.931.479.044 10,210,000.935 1-12 2045 10 905 19 145 498 468.334.699 29 746 9 693 356 (458 912 303) 737 434 194 22,303 10,538,799,321 9.279 15.914.975 8.636.619 (430.858.631) 759,657,017 1-12 2046 438.114.684 (403,008,274) 785,679,064 10,921,470,111 1-12 2047 7.851 13.138.654 408.476.443 16.273 7.654.212 1-12 6,605 10,774,947 376,289,127 11,797 6,753,998 (372,279,974) 815,886,389 11,365,076,526 2048 11,876,326,380 1-12 2049 5,521 8,777,852 342,413,795 8,319 5,923,852 (339,568,113) 850,817,968 1-12 2050 4,584 7,098,066 309,513,714 5,547 5,157,676 (307,578,872) 890,879,863 12,459,627,372 1-12 2051 3,782 5,695,635 279,384,459 3,549 4,452,864 (278,145,237) 936,331,028 13,117,813,163 1-12 2052 3,100 4,533,153 252,715,908 2.359 3,814,271 (251,999,384)987,350,815 13,853,164,594 1-12 2053 2 5 2 4 3 577 784 226 780 559 1,467 3 249 204 (226 453 446) 1 044 189 909 14.670.901.057 15,577,684,841 2054 2.042 2.800.123 200.575.200 833 2.749.026 (200.524.936) 1.107.308.721 1-12 16,579,183,902 1-12 2055 1,639 2,171,711 175,529,878 385 2,308,856 (175,667,409) 1,177,166,469 17,680,428,324 1-12 2056 1.306 1,667,816 152,646,166 89 1,925,041 (152.903.480) 1,254,147,902 1-12 2057 1,033 1,267,848 132,205,250 1,592,690 (132,530,092) 1,338,621,016 18,886,519,248 1-12 2058 811 953.971 113.791.169 1.307.841 (114,145,038) 1.430.983.826 20.203.358.035 1-12 2059 633 710,557 96,592,605 1,065,999 (96,948,047) 1,531,714,628 21,638,124,616 1-12 2060 491 528.268 81,007,025 861.999 (81.340.757) 1,641,354,517 23.198.138.376 2061 378 393.029 67.534.843 692.124 (67.833.938) 1.760.435.473 24.890.739.910 1-12 1-12 289 290,229 56,060,128 552,562 (56,322,462) 1,889,516,725 26,723,934,173 2062 1-12 2063 220 212,735 46,332,471 438,570 (46,558,306) 2,029,216,000 28,706,591,867 1-12 2064 166 154,715 38,160,569 345,995 (38,351,849) 2,180,215,031 30,848,455,049 2065 125 111,585 31,339,195 271,479 (31,499,089) 2,343,261,515 33,160,217,475 1-12 1-12 2066 93 79,863 25,632,598 211,790 (25,764,525) 2.519.176.995 35,653,629,946 1-12 2067 69 56.654 20 924 166 164,111 (21.031.622) 2.708.859.780 38.341.458.104 16.942.992 (17.029.804) 41.237.716.941 51 39.726 126,538 2.913.288.641 1-12 2068 1-12 2069 37 27,430 13,560,292 96,768 (13,629,631) 3,133,535,539 44,357,622,849 1-12 2070 27 18,592 10,752,486 73,166 (10,807,059) 3,370,757,766 47,717,573,555 23 4,484,883 1,779,980,632 49,493,046,394 1-6 2071 6.742 29.652 (4.507.793)

Annual

#### Attachment A(2)

#### Discount Rate at 7.79% (Past Valuation Discount Rate)

California Public Employees Retirement System Summary of Projected Values All Plans

1.64%

13.53%

-267.34%

2017.40%

<u>Annual</u> 7.79% Discount Rate Years All Years: LTC Program Funded Ratio:
Surplus/(Deficit) \$ = PV (Fund Balance + Earnings):
Surplus/(Deficit) \$ as a Percentage of PV(Premiums):
Fund Balance @ End of Projection: 151.95% 100.00% Totals - 7/2011 thru 6/2071: As a % of Premiums: 90,896,489 750,438,987 (14,825,573,880) 111,878,327,526

| ls - Present Values:<br>% of PV(Premiums): |             |         | 2,777,521,058<br>100.00% | 4,620,023,740<br>166.34% | 54,531,566<br>1.96% | 259,411,616<br>9.34% | (2,156,445,864)<br>-77.64% | 8,807,942,560<br>317.12% |                               |
|--|-------------|---------|--------------------------|--------------------------|---------------------|----------------------|----------------------------|--------------------------|-------------------------------|
| <u>Months</u>                              | <u>Year</u> | Lives   | Total Premiums           | LTC Paid Claims          | RoP Claims          | Total Expenses       | <u>Earnings</u>            | Investment Earnings      | Fund Balance<br>3,276,784,822 |
| 7-12                                       | 2011        | 152,290 | 163,214,995              | 86,518,260               | 3,387,165           | 8,981,681            | 64,327,889                 | 126,847,662              | 3,467,960,373                 |
| 1-12                                       | 2012        | 147,709 | 319,059,141              | 189,064,343              | 6,895,002           | 18,148,098           | 104,951,698                | 275,068,208              | 3,847,980,279                 |
| 1-12                                       | 2013        | 143,043 | 310,506,451              | 213,621,901              | 7,167,348           | 18,746,908           | 70,970,294                 | 303,425,264              | 4,222,375,837                 |
| 1-12                                       | 2014        | 138,324 | 301,716,982              | 235,804,779              | 7,218,240           | 19,383,443           | 39,310,519                 | 331,255,026              | 4,592,941,383                 |
| 1-12                                       | 2015        | 133,569 | 292,812,777              | 252,377,141              | 6,975,166           | 20,045,063           | 13,415,407                 | 359,123,667              | 4,965,480,457                 |
| 1-12                                       | 2016        | 128,772 | 283,662,504              | 271,464,517              | 6,685,429           | 20,730,126           | (15,217,569)               | 387,046,995              | 5,337,309,883                 |
| 1-12                                       | 2017        | 123,912 | 274,128,945              | 291,313,450              | 6,346,259           | 21,274,336           | (44,805,099)               | 414,844,961              | 5,707,349,745                 |
| 1-12                                       | 2018        | 118,985 | 264,230,361              | 309,404,757              | 5,893,779           | 21,763,059           | (72,831,233)               | 442,559,146              | 6,077,077,658                 |
| 1-12                                       | 2019        | 114,031 | 254,007,602              | 326,727,442              | 5,344,120           | 22,208,604           | (100,272,564)              | 470,294,971              | 6,447,100,065                 |
| 1-12                                       | 2020        | 109,076 | 243,443,552              | 343,459,398              | 4,812,904           | 22,630,437           | (127,459,187)              | 498,013,723              | 6,817,654,601                 |
| 1-12                                       | 2021        | 104,128 | 232,599,901              | 357,608,875              | 4,330,873           | 23,046,183           | (152,386,030)              | 525,884,874              | 7,191,153,446                 |
| 1-12                                       | 2022        | 99,172  | 221,541,618              | 373,880,074              | 3,887,360           | 23,412,613           | (179,638,430)              | 553,979,886              | 7,565,494,902                 |
| 1-12                                       | 2023        | 94,202  | 210,311,139              | 393,964,804              | 3,405,930           | 23,700,092           | (210,759,687)              | 581,936,168              | 7,936,671,382                 |
| 1-12                                       | 2024        | 89,249  | 199,001,068              | 414,108,559              | 2,918,933           | 23,905,755           | (241,932,180)              | 609,626,831              | 8,304,366,033                 |
| 1-12                                       | 2025        | 84,345  | 187,658,130              | 435,644,456              | 2,507,685           | 24,047,771           | (274,541,782)              | 637,011,494              | 8,666,835,745                 |
| 1-12                                       | 2026        | 79,502  | 176,331,779              | 459,722,190              | 2,180,288           | 24,141,270           | (309,711,968)              | 663,886,699              | 9,021,010,476                 |
| 1-12                                       | 2027        | 74,710  | 165,080,604              | 483,751,478              | 1,906,328           | 24,152,780           | (344,729,982)              | 690,095,289              | 9,366,375,784                 |
| 1-12                                       | 2028        | 69,968  | 153,956,756              | 504,626,657              | 1,631,506           | 24,045,434           | (376,346,841)              | 715,733,314              | 9,705,762,256                 |
| 1-12                                       | 2029        | 65,294  | 142,987,659              | 521,966,548              | 1,364,822           | 23,812,655           | (404,156,366)              | 741,056,823              | 10,042,662,713                |
| 1-12                                       | 2030        | 60,718  | 132,203,311              | 539,004,799              | 1,135,750           | 23,470,506           | (431,407,744)              | 766,235,308              | 10,377,490,277                |
| 1-12                                       | 2031        | 56,254  | 121,641,574              | 558,280,229              | 951,176             | 23,058,064           | (460,647,895)              | 791,192,009              | 10,708,034,391                |
| 1-12                                       | 2032        | 51,885  | 111,327,765              | 577,770,778              | 815,223             | 22,660,699           | (489,918,935)              | 815,764,789              | 11,033,880,245                |
| 1-12                                       | 2033        | 47,618  | 101,314,984              | 591,395,682              | 685,794             | 22,142,029           | (512,908,521)              | 840,199,842              | 11,361,171,566                |
| 1-12                                       | 2034        | 43,471  | 91,646,420               | 599,727,318              | 556,720             | 21,476,888           | (530,114,506)              | 864,977,998              | 11,696,035,058                |
| 1-12                                       | 2035        | 39,474  | 82,340,290               | 606,614,417              | 435,286             | 20,682,434           | (545,391,847)              | 890,451,999              | 12,041,095,209                |
| 1-12                                       | 2036        | 35,657  | 73,479,687               | 614,058,683              | 337,397             | 19,792,076           | (560,708,468)              | 916,720,147              | 12,397,106,888                |
| 1-12                                       | 2037        | 32,030  | 65,124,492               | 618,983,471              | 268,664             | 18,825,823           | (572,953,466)              | 943,928,897              | 12,768,082,319                |
| 1-12                                       | 2038        | 28,595  | 57,322,422               | 615,518,913              | 214,154             | 17,781,528           | (576,192,173)              | 972,614,502              | 13,164,504,648                |
| 1-12                                       | 2039        | 25,365  | 50,086,087               | 603,959,865              | 165,968             | 16,651,118           | (570,690,864)              | 1,003,642,845            | 13,597,456,629                |
| 1-12                                       | 2040        | 22,364  | 43,432,755               | 589,474,789              | 123,600             | 15,462,962           | (561,628,596)              | 1,037,691,626            | 14,073,519,659                |
| 1-12                                       | 2041        | 19,607  | 37,389,850               | 574,966,945              | 89,744              | 14,265,872           | (551,932,712)              | 1,075,130,563            | 14,596,717,511                |
| 1-12                                       | 2042        | 17,091  | 31,962,611               | 557,053,936              | 65,926              | 13,093,630           | (538,250,881)              | 1,116,361,452            | 15,174,828,082                |
| 1-12                                       | 2043        | 14,806  | 27,134,548               | 531,609,781              | 50,599              | 11,943,747           | (516,469,579)              | 1,162,164,918            | 15,820,523,421                |
| 1-12                                       | 2044        | 12,745  | 22,874,351               | 500,375,134              | 38,684              | 10,805,046           | (488,344,513)              | 1,213,506,005            | 16,545,684,913                |
| 1-12                                       | 2045        | 10,905  | 19,145,498               | 468,334,699              | 29,746              | 9,693,356            | (458,912,303)              | 1,271,121,903            | 17,357,894,513                |
| 1-12                                       | 2046        | 9,279   | 15,914,975               | 438,114,684              | 22,303              | 8,636,619            | (430,858,631)              | 1,335,474,251            | 18,262,510,133                |
| 1-12                                       | 2047        | 7,851   | 13,138,654               | 408,476,443              | 16,273              | 7,654,212            | (403,008,274)              | 1,407,002,696            | 19,266,504,555                |
| 1-12                                       | 2048        | 6,605   | 10,774,947               | 376,289,127              | 11,797              | 6,753,998            | (372,279,974)              | 1,486,365,965            | 20,380,590,545                |
| 1-12                                       | 2049        | 5,521   | 8,777,852                | 342,413,795              | 8,319               | 5,923,852            | (339,568,113)              | 1,574,400,821            | 21,615,423,253                |
| 1-12                                       | 2050        | 4,584   | 7,098,066                | 309,513,714              | 5,547               | 5,157,676            | (307,578,872)              | 1,671,831,003            | 22,979,675,384                |
| 1-12                                       | 2051        | 3,782   | 5,695,635                | 279,384,459              | 3,549               | 4,452,864            | (278,145,237)              | 1,779,254,206            | 24,480,784,353                |
| 1-12                                       | 2052        | 3,100   | 4,533,153                | 252,715,908              | 2,359               | 3,814,271            | (251,999,384)              | 1,897,212,907            | 26,125,997,875                |
| 1-12                                       | 2053        | 2,524   | 3,577,784                | 226,780,559              | 1,467               | 3,249,204            | (226,453,446)              | 2,026,350,945            | 27,925,895,374                |
| 1-12                                       | 2054        | 2,042   | 2,800,123                | 200,575,200              | 833                 | 2,749,026            | (200,524,936)              | 2,167,557,776            | 29,892,928,214                |
| 1-12                                       | 2055        | 1,639   | 2,171,711                | 175,529,878              | 385                 | 2,308,856            | (175,667,409)              | 2,321,755,087            | 32,039,015,893                |
| 1-12                                       | 2056        | 1,306   | 1,667,816                | 152,646,166              | 89                  | 1,925,041            | (152,903,480)              | 2,489,824,250            | 34,375,936,663                |
| 1-12                                       | 2057        | 1,033   | 1,267,848                | 132,205,250              | -                   | 1,592,690            | (132,530,092)              | 2,672,668,148            | 36,916,074,718                |
| 1-12                                       | 2058        | 811     | 953,971                  | 113,791,169              | -                   | 1,307,841            | (114,145,038)              | 2,871,262,091            | 39,673,191,771                |
| 1-12                                       | 2059        | 633     | 710,557                  | 96,592,605               | -                   | 1,065,999            | (96,948,047)               | 3,086,708,644            | 42,662,952,368                |
| 1-12                                       | 2060        | 491     | 528,268                  | 81,007,025               | -                   | 861,999              | (81,340,757)               | 3,320,223,386            | 45,901,834,997                |
| 1-12                                       | 2061        | 378     | 393,029                  | 67,534,843               | -                   | 692,124              | (67,833,938)               | 3,573,065,097            | 49,407,066,156                |
| 1-12                                       | 2062        | 289     | 290,229                  | 56,060,128               | -                   | 552,562              | (56,322,462)               | 3,846,577,098            | 53,197,320,792                |
| 1-12                                       | 2063        | 220     | 212,735                  | 46,332,471               | -                   | 438,570              | (46,558,306)               | 4,142,223,747            | 57,292,986,233                |
| 1-12                                       | 2064        | 166     | 154,715                  | 38,160,569               | -                   | 345,995              | (38,351,849)               | 4,461,600,963            | 61,716,235,348                |
| 1-12                                       | 2065        | 125     | 111,585                  | 31,339,195               | -                   | 271,479              | (31,499,089)               | 4,806,443,497            | 66,491,179,755                |
| 1-12                                       | 2066        | 93      | 79,863                   | 25,632,598               | -                   | 211,790              | (25,764,525)               | 5,178,638,675            | 71,644,053,905                |
| 1-12                                       | 2067        | 69      | 56,654                   | 20,924,166               | -                   | 164,111              | (21,031,622)               | 5,580,235,541            | 77,203,257,823                |
| 1-12                                       | 2068        | 51      | 39,726                   | 16,942,992               | -                   | 126,538              | (17,029,804)               | 6,013,455,249            | 83,199,683,268                |
| 1-12                                       | 2069        | 37      | 27,430                   | 13,560,292               | -                   | 96,768               | (13,629,631)               | 6,480,711,259            | 89,666,764,897                |
| 1-12                                       | 2070        | 27      | 18,592                   | 10,752,486               | -                   | 73,166               | (10,807,059)               | 6,984,608,998            | 96,640,566,836                |
| 1-6  | 2071        | 23      | 6,742                    | 4,484,883                | -                   | 29,652               | (4,507,793)                | 3,693,479,425            | 100,329,538,467               |

## Attachment A(3) Morbidity 10% Lower

California Public Employees Retirement System Summary of Projected Values All Plans

|  |              |                    |                            | All P                      | lans                   |                          |                                |  |                                  |
|--|--------------|--------------------|----------------------------|----------------------------|------------------------|--------------------------|--------------------------------|--|----------------------------------|
| LTC Program Funded Ratio   | :            |                    | 159.81%                    |                            |                        |                          |                                | ount Rate Years 1 - 10:<br>count Rate Years 11+: | <u>Annual</u><br>6.25%<br>7.60%  |
| Surplus/(Deficit) \$ = PV (Fund Balance + Earnings):                                       |              |                    |                            | = Standard Program         |                        |                          |                                |  |                                  |
| Surplus/(Deficit) \$ as a Percentage of PV(Premiums):<br>Fund Balance @ End of Projection: |              |                    | 40.49%<br>87,148,849,598   | = Standard Program 90.00%  | Definition             | 100.00%                  |                                |  |                                  |
| Totals - 7/2011 thru 6/207<br>As a % of Premiums:  |              |                    | 5,545,681,269<br>100.00%   | 17,576,927,706<br>316.95%  | 90,896,489<br>1.64%    | 750,438,987<br>13.53%    | (12,872,581,913)<br>-232.12%   | 96,744,646,690<br>1744.50%                       |                                  |
| Totals - Present Values:<br>As a % of PV(Premiums):  |              |                    | 3,028,780,651<br>100.00%   | 4,730,736,537<br>156.19%   | 58,838,801<br>1.94%    | 289,610,105<br>9.56%     | (2,050,404,792)<br>-67.70%     | 8,728,123,686<br>288.17%                         |                                  |
| <u>Months</u>  | <u>Year</u>  | Lives              | Total Premiums             | LTC Paid Claims            | RoP Claims             | Total Expenses           | <u>Earnings</u>                | Investment Earnings                              | Fund Balance<br>3,276,784,822    |
| 7-12   | 2011         | 152,290            | 163,214,995                | 77,866,434                 | 3,387,165              | 8,981,681                | 72,979,715                     | 102,276,480                                      | 3,452,041,017                    |
| 1-12   | 2012         | 147,709            | 319,059,141                | 170,157,909                | 6,895,002              | 18,148,098               | 123,858,132                    | 220,278,881                                      | 3,796,178,030                    |
| 1-12   | 2013         | 143,043            | 310,506,451                | 192,259,711                | 7,167,348              | 18,746,908               | 92,332,485<br>62,890,997       | 240,855,044                                      | 4,129,365,558                    |
| 1-12<br>1-12   | 2014<br>2015 | 138,324<br>133,569 | 301,716,982<br>292,812,777 | 212,224,301<br>227,139,427 | 7,218,240<br>6,975,166 | 19,383,443<br>20,045,063 | 38,653,122                     | 260,681,772<br>280,152,202                       | 4,452,938,328<br>4,771,743,651   |
| 1-12   | 2016         | 128,772            | 283,662,504                | 244,318,065                | 6,685,429              | 20,730,126               | 11,928,883                     | 299,252,480                                      | 5,082,925,014                    |
| 1-12   | 2017         | 123,912            | 274,128,945                | 262,182,105                | 6,346,259              | 21,274,336               | (15,673,754)                   | 317,824,791                                      | 5,385,076,051                    |
| 1-12   | 2018         | 118,985            | 264,230,361                | 278,464,281                | 5,893,779              | 21,763,059               | (41,890,757)                   | 335,872,288                                      | 5,679,057,581                    |
| 1-12   | 2019         | 114,031            | 254,007,602                | 294,054,698                | 5,344,120              | 22,208,604               | (67,599,820)                   | 353,441,854                                      | 5,964,899,615                    |
| 1-12   | 2020         | 109,076            | 243,443,552                | 309,113,459                | 4,812,904              | 22,630,437               | (93,113,248)                   | 370,472,807                                      | 6,242,259,174                    |
| 1-12   | 2021         | 104,128            | 232,599,901                | 321,847,988                | 4,330,873              | 23,046,183               | (116,625,142)                  | 428,536,725                                      | 6,554,170,757                    |
| 1-12<br>1-12   | 2022<br>2023 | 99,172<br>94,202   | 221,541,618<br>210,311,139 | 336,492,067<br>354,568,323 | 3,887,360<br>3,405,930 | 23,412,613<br>23,700,092 | (142,250,422)<br>(171,363,207) | 493,448,538<br>519,037,726                       | 6,905,368,873<br>7,253,043,392   |
| 1-12   | 2023         | 89,249             | 199,001,068                | 372,697,703                | 2,918,933              | 23,700,092               | (200,521,324)                  | 544,342,363                                      | 7,596,864,431                    |
| 1-12   | 2025         | 84,345             | 187,658,130                | 392,080,011                | 2,507,685              | 24,047,771               | (230,977,336)                  | 569,323,451                                      | 7,935,210,546                    |
| 1-12   | 2026         | 79,502             | 176,331,779                | 413,749,971                | 2,180,288              | 24,141,270               | (263,739,749)                  | 593,798,314                                      | 8,265,269,111                    |
| 1-12   | 2027         | 74,710             | 165,080,604                | 435,376,330                | 1,906,328              | 24,152,780               | (296,354,834)                  | 617,625,619                                      | 8,586,539,896                    |
| 1-12   | 2028         | 69,968             | 153,956,756                | 454,163,991                | 1,631,506              | 24,045,434               | (325,884,176)                  | 640,887,506                                      | 8,901,543,226                    |
| 1-12   | 2029         | 65,294             | 142,987,659                | 469,769,893                | 1,364,822              | 23,812,655               | (351,959,711)                  | 663,806,905                                      | 9,213,390,420                    |
| 1-12<br>1-12   | 2030<br>2031 | 60,718<br>56,254   | 132,203,311<br>121,641,574 | 485,104,319<br>502,452,206 | 1,135,750<br>951,176   | 23,470,506<br>23,058,064 | (377,507,264)<br>(404,819,872) | 686,530,125<br>708,986,717                       | 9,522,413,281<br>9,826,580,126   |
| 1-12   | 2032         | 51,885             | 111,327,765                | 519,993,700                | 815,223                | 22,660,699               | (432,141,857)                  | 731,030,762                                      | 10,125,469,030                   |
| 1-12   | 2033         | 47,618             | 101,314,984                | 532,256,114                | 685,794                | 22,142,029               | (453,768,953)                  | 752,875,638                                      | 10,424,575,715                   |
| 1-12   | 2034         | 43,471             | 91,646,420                 | 539,754,586                | 556,720                | 21,476,888               | (470,141,774)                  | 774,941,376                                      | 10,729,375,317                   |
| 1-12   | 2035         | 39,474             | 82,340,290                 | 545,952,975                | 435,286                | 20,682,434               | (484,730,406)                  | 797,534,720                                      | 11,042,179,631                   |
| 1-12   | 2036         | 35,657             | 73,479,687                 | 552,652,815                | 337,397                | 19,792,076               | (499,302,600)                  | 820,738,274                                      | 11,363,615,305                   |
| 1-12<br>1-12   | 2037         | 32,030             | 65,124,492                 | 557,085,124                | 268,664                | 18,825,823               | (511,055,118)                  | 844,676,795<br>869,817,132                       | 11,697,236,982                   |
| 1-12   | 2038<br>2039 | 28,595<br>25,365   | 57,322,422<br>50,086,087   | 553,967,022<br>543,563,879 | 214,154<br>165,968     | 17,781,528<br>16,651,118 | (514,640,282)<br>(510,294,877) | 896,914,758                                      | 12,052,413,832<br>12,439,033,713 |
| 1-12   | 2040         | 22,364             | 43,432,755                 | 530,527,310                | 123,600                | 15,462,962               | (502,681,117)                  | 926,558,089                                      | 12,862,910,685                   |
| 1-12   | 2041         | 19,607             | 37,389,850                 | 517,470,250                | 89,744                 | 14,265,872               | (494,436,017)                  | 959,063,355                                      | 13,327,538,023                   |
| 1-12   | 2042         | 17,091             | 31,962,611                 | 501,348,542                | 65,926                 | 13,093,630               | (482,545,487)                  | 994,773,527                                      | 13,839,766,063                   |
| 1-12   | 2043         | 14,806             | 27,134,548                 | 478,448,803                | 50,599                 | 11,943,747               | (463,308,601)                  | 1,034,362,617                                    | 14,410,820,079                   |
| 1-12   | 2044         | 12,745             | 22,874,351                 | 450,337,621                | 38,684                 | 10,805,046               | (438,307,000)                  | 1,078,664,282                                    | 15,051,177,362                   |
| 1-12<br>1-12   | 2045         | 10,905<br>9,279    | 19,145,498                 | 421,501,229<br>394,303,215 | 29,746<br>22,303       | 9,693,356                | (412,078,833)                  | 1,128,309,177                                    | 15,767,407,706                   |
| 1-12   | 2046<br>2047 | 7,851              | 15,914,975<br>13,138,654   | 367,628,798                | 16,273                 | 8,636,619<br>7,654,212   | (387,047,162)<br>(362,160,630) | 1,183,683,075<br>1,245,149,776                   | 16,564,043,619<br>17,447,032,765 |
| 1-12   | 2048         | 6,605              | 10,774,947                 | 338,660,214                | 11,797                 | 6,753,998                | (334,651,061)                  | 1,313,262,554                                    | 18,425,644,258                   |
| 1-12   | 2049         | 5,521              | 8,777,852                  | 308,172,415                | 8,319                  | 5,923,852                | (305,326,734)                  | 1,388,727,692                                    | 19,509,045,216                   |
| 1-12   | 2050         | 4,584              | 7,098,066                  | 278,562,343                | 5,547                  | 5,157,676                | (276,627,500)                  | 1,472,148,362                                    | 20,704,566,078                   |
| 1-12   | 2051         | 3,782              | 5,695,635                  | 251,446,013                | 3,549                  | 4,452,864                | (250,206,791)                  | 1,564,013,087                                    | 22,018,372,374                   |
| 1-12   | 2052         | 3,100              | 4,533,153                  | 227,444,317                | 2,359                  | 3,814,271                | (226,727,794)                  | 1,664,757,901                                    | 23,456,402,482                   |
| 1-12<br>1-12   | 2053<br>2054 | 2,524              | 3,577,784                  | 204,102,503                | 1,467<br>833           | 3,249,204                | (203,775,390)<br>(180,467,416) | 1,774,903,537<br>1,895,181,715                   | 25,027,530,628<br>26,742,244,928 |
| 1-12   | 2054         | 2,042<br>1,639     | 2,800,123<br>2,171,711     | 180,517,680<br>157,976,890 | 385                    | 2,749,026<br>2,308,856   | (158,114,421)                  | 2,026,347,038                                    | 28,610,477,545                   |
| 1-12   | 2056         | 1,306              | 1,667,816                  | 137,381,550                | 89                     | 1,925,041                | (137,638,863)                  | 2,169,112,841                                    | 30,641,951,522                   |
| 1-12   | 2057         | 1,033              | 1,267,848                  | 118,984,725                | -                      | 1,592,690                | (119,309,567)                  | 2,324,205,151                                    | 32,846,847,106                   |
| 1-12   | 2058         | 811                | 953,971                    | 102,412,052                | -                      | 1,307,841                | (102,765,921)                  | 2,492,406,905                                    | 35,236,488,090                   |
| 1-12   | 2059         | 633                | 710,557                    | 86,933,344                 | -                      | 1,065,999                | (87,288,787)                   | 2,674,605,475                                    | 37,823,804,778                   |
| 1-12   | 2060         | 491                | 528,268                    | 72,906,323                 | -                      | 861,999                  | (73,240,054)                   | 2,871,779,417                                    | 40,622,344,141                   |
| 1-12   | 2061         | 378                | 393,029                    | 60,781,359                 | -                      | 692,124                  | (61,080,454)                   | 3,084,936,413                                    | 43,646,200,100                   |
| 1-12<br>1-12   | 2062<br>2063 | 289<br>220         | 290,229<br>212,735         | 50,454,116<br>41,699,224   | -                      | 552,562<br>438,570       | (50,716,449)<br>(41,925,059)   | 3,315,148,752<br>3,563,584,579                   | 46,910,632,402<br>50,432,291,923 |
| 1-12   | 2063         | 166                | 154,715                    | 34,344,512                 | -                      | 345,995                  | (34,535,792)                   | 3,831,516,154                                    | 54,229,272,285                   |
| 1-12   | 2065         | 125                | 111,585                    | 28,205,275                 | -                      | 271,479                  | (28,365,170)                   | 4,120,325,161                                    | 58,321,232,277                   |
| 1-12   | 2066         | 93                 | 79,863                     | 23,069,338                 | -                      | 211,790                  | (23,201,265)                   | 4,431,513,597                                    | 62,729,544,609                   |
| 1-12   | 2067         | 69                 | 56,654                     | 18,831,749                 | -                      | 164,111                  | (18,939,206)                   | 4,766,710,514                                    | 67,477,315,917                   |
| 1-12   | 2068         | 51                 | 39,726                     | 15,248,693                 | -                      | 126,538                  | (15,335,505)                   | 5,127,679,734                                    | 72,589,660,146                   |
| 1-12   | 2069         | 37                 | 27,430                     | 12,204,263                 | -                      | 96,768                   | (12,273,601)                   | 5,516,336,061                                    | 78,093,722,606                   |
| 1-12   | 2070         | 27                 | 18,592                     | 9,677,237                  | -                      | 73,166                   | (9,731,811)                    | 5,934,743,301                                    | 84,018,734,097                   |
| 1-6  | 2071         | 23                 | 6,742                      | 4,036,395                  | -                      | 29,652                   | (4,059,305)                    | 3,134,174,806                                    | 87,148,849,598                   |

### Attachment A(4) Expenses 20% Lower

#### **California Public Employees Retirement System**

Summary of Projected Values All Plans

Discount Rate Years 1 - 10: 6.25% LTC Program Funded Ratio: 129.74% Discount Rate Years 11+: 7.60% Surplus/(Deficit) \$ = PV (Fund Balance + Earnings): ,114,173 = Standard Program Definition Surplus/(Deficit) \$ as a Percentage of PV(Premiums) 24.80% = Standard Program Definition Fund Balance @ Fnd of Projection: 53.101.315.574 100.00% 80.00% Totals - 7/2011 thru 6/2071: 19.529.919.673 90.896.489 617.089.161 (14.692.224.054) 64.516.754.807 5.545.681.269 As a % of Premiums: 100.00% 352.16% 1.64% 11.13% -264.93% 1163.37% Totals - Present Values: 3,028,780,651 5,256,373,930 58,838,801 239,238,568 (2,525,670,648) 7,190,981,971 As a % of PV(Premiums): 100.00% 173.55% 1.94% 7.90% -83.39% 237.42% Months Year Lives Total Premiums LTC Paid Claims RoP Claims Total Expenses **Earnings** Investment Earnings Fund Balance 3.276.784.822 7-12 2011 152,290 163,214,995 86,518,260 3,387,165 7,470,592 65,838,978 102,168,426 3,444,792,225 1-12 2012 147,709 319,059,141 189,064,343 6,895,002 15,094,199 108,005,597 219,343,445 3,772,141,267 143,043 310,506,451 213,621,901 7,167,348 15,590,271 74,126,932 238,803,199 4,085,071,398 1-12 2013 1-12 2014 138,324 301,716,982 235,804,779 7,218,240 16,117,281 42,576,681 257,290,726 4,384,938,806 1-12 2015 133.569 292.812.777 252,377,141 6,975,166 16,664,893 16,795,577 275.232.888 4,676,967,271 (11.719.251) 292 605 684 4 957 853 705 1-12 2016 128 772 283.662.504 271.464.517 6.685.429 17 231 809 6.346.259 (41,195,187) 309.225.625 5.225.884.142 2017 123.912 274.128.945 291.313.450 17.664.424 1-12 325,086,543 1-12 2018 118,985 264,230,361 309,404,757 5,893,779 18,049,552 (69,117,726) 5,481,852,959 18,398,887 1-12 2019 114.031 254.007.602 326,727,442 5.344.120 (96,462,847) 340.230.320 5,725,620,433 243,443,552 343,459,398 4,812,904 18,728,109 (123,556,860) 354,579,204 5,956,642,777 1-12 2020 109,076 1-12 2021 104.128 232.599.901 357,608,875 4,330,873 19.051.397 (148,391,244) 407,626,558 6,215,878,091 1-12 2022 99,172 221,541,618 373,880,074 3,887,360 19,334,148 (175,559,965) 466,496,735 6,506,814,861 1-12 2023 94.202 210.311.139 393.964.804 3.405.930 19.552.498 (206,612,094) 487.434.734 6.787.637.501 414.108.559 199.001.068 2.918.933 19.704.091 507.584.902 7.057.491.887 1-12 2024 89.249 (237.730.516)84,345 187,658,130 435,644,456 2,507,685 19,803,585 (270,297,596) 526,867,046 7,314,061,337 1-12 2025 1-12 2026 79.502 176,331,779 459,722,190 2,180,288 19,863,231 (305,433,929) 545,039,283 7,553,666,691 165,080,604 483,751,478 19,856,270 (340,433,472) 561,901,831 7,775,135,050 1-12 2027 74,710 1,906,328 2028 69,968 153,956,756 504,626,657 1,631,506 19,753,115 (372,054,522) 577,498,037 7,980,578,566 1-12 1-12 2029 65,294 142,987,659 521,966,548 1,364,822 19,548,452 (399,892,163) 592,023,053 8,172,709,456 1-12 2030 60.718 132.203.311 539 004 799 1.135.750 19 255 253 (427, 192, 492) 605 582 938 8 351 099 903 618.039.098 1-12 2031 56.254 121.641.574 558.280.229 951,176 18.904.964 (456, 494, 795) 8.512.644.205 111,327,765 51,885 577,770,778 815,223 18,565,938 (485,824,174) 629,166,140 8,655,986,172 1-12 2032 1-12 2033 47,618 101,314,984 591,395,682 685,794 18,128,962 (508,895,454) 639,131,830 8,786,222,548 1-12 2034 43,471 91,646,420 599,727,318 556,720 17,573,956 (526,211,574) 648,325,370 8,908,336,344 39,474 16,914,792 9,023,716,150 1-12 2035 82,340,290 606,614,417 435,286 (541,624,206) 657,004,012 1-12 2036 35,657 73,479,687 614,058,683 337,397 16,178,498 (557,094,891) 665,169,964 9,131,791,223 1-12 2037 32.030 65,124,492 618,983,471 268,664 15.381.357 (569.509.000) 672.865.554 9,235,147,776 1-12 2038 28.595 57.322.422 615.518.913 214.154 14.521.792 (572,932,437) 680.505.679 9,342,721,018 603,959,865 165,968 9,463,905,169 1-12 2039 25,365 50,086,087 13,593,454 (567,633,200) 688,817,351 43,432,755 589,474,789 12,619,275 (558,784,909) 698,333,489 9,603,453,749 2040 22.364 123,600 1-12 1-12 2041 19,607 37.389.850 574,966,945 89,744 11,638,642 (549,305,482) 709.276.192 9,763,424,460 1-12 2042 17.091 31.962.611 557,053,936 65.926 10,678,846 (535.836.098) 721,888,369 9,949,476,732 1-12 2043 14,806 27,134,548 531,609,781 50,599 9,738,009 (514,263,841) 736,770,690 10,171,983,581 1-12 2044 12.745 22,874,351 500.375.134 38.684 8.807.249 (486,346,716) 754.689.791 10.440.326.656 1-12 2045 10 905 19 145 498 468.334.699 29 746 7 899 325 (457.118.272) 776.174.898 10.759.383.282 (429,258,727) 22,303 801,471,043 11,131,595,598 2046 9.279 15.914.975 7.036.715 1-12 438.114.684 (401,589,048) 830,785,691 11,560,792,241 1-12 2047 7.851 13.138.654 408.476.443 16.273 6.234.987 1-12 2048 6,605 10,774,947 376,289,127 11,797 5,500,429 (371,026,405) 864,522,709 12,054,288,545 1-12 2049 5,521 8,777,852 342,413,795 8,319 4,823,295 (338,467,556) 903,240,136 12,619,061,125 1-12 2050 4,584 7,098,066 309,513,714 5,547 4,198,613 (306,619,808) 947,364,400 13,259,805,717 1-12 2051 3,782 5,695,635 279,384,459 3,549 3,624,238 (277,316,610) 997,176,351 13,979,665,458 1-12 2052 3,100 4,533,153 252,715,908 2,359 3,104,025 (251,289,138) 1,052,878,840 14,781,255,160 1-12 2053 2 5 2 4 3 577 784 226 780 559 1,467 2 643 758 (225 848 000) 1 114 748 048 15.670.155.208 2054 2.042 2.800.123 200.575.200 833 2.236.440 (200.012.350) 1.183.271.750 16.653.414.609 1-12 1-12 2055 1,639 2,171,711 175,529,878 385 1,878,072 (175,236,624) 1,258,938,520 17,737,116,504 1-12 2056 1.306 1,667,816 152,646,166 89 1.565.639 (152.544.078) 1.342.164.636 18,926,737,062 1-12 2057 1,033 1,267,848 132,205,250 1,295,156 (132,232,557) 1,433,351,967 20,227,856,472 1-12 2058 811 953.971 113.791.169 1.063.376 (113.900.574) 1.532.934.904 21.646.890.803 1-12 2059 633 710,557 96,592,605 866,629 (96,748,677) 1,641,430,836 23,191,572,962 24.869.816.341 1-12 2060 491 528.268 81,007,025 700,707 (81, 179, 465) 1.759.422.844 2061 378 393.029 67.534.843 562,565 (67.704.378) 1.887.488.025 26.689.599.988 1-12 1-12 289 290,229 56,060,128 449,080 (56,218,980) 2,026,234,110 28,659,615,118 2062 1-12 2063 220 212,735 46,332,471 356,395 (46,476,131) 2,176,330,947 30,789,469,934 1-12 2064 166 154,715 38,160,569 281,134 (38,286,989) 2,338,516,288 33,089,699,234 2065 125 111,585 31,339,195 220,560 (31,448,170) 2,513,598,057 35,571,849,120 1-12 1-12 2066 93 79,863 25,632,598 172.044 (25,724,779) 2.702.462.551 38.248.586.892 1-12 2067 69 56.654 20 924 166 133 296 (21.000.808) 2.906.077.711 41.133.663.795 16.942.992 3.125.497.202 51 39.726 102.763 (17.006.029) 44.242.154.968 1-12 2068 1-12 2069 37 27,430 13,560,292 78,576 (13,611,439) 3,361,873,541 47,590,417,071 1-12 2070 27 18,592 10,752,486 59,405 (10,793,299) 3,616,450,666 51,196,074,438

4,484,883

6.742

23

2071

1-6

53,101,315,574

1,909,743,423

(4,502,287)

24.146

Annual

## Attachment A(5) Lapses .25% Higher

California Public Employees Retirement System Summary of Projected Values All Plans

|   |              |                    |                            | All P   | Plans                  |                          |                                |                                |                                  |
|---|--------------|--------------------|----------------------------|---|------------------------|--------------------------|--------------------------------|--------------------------------|----------------------------------|
|   |              |                    |                            |   |                        |                          |                                |                                | <u>Annual</u>                    |
|   |              |                    |                            |   |                        |                          |                                | ount Rate Years 1 - 10:        | 6.25%                            |
| LTC Program Funded Ratio                                      |              | !\                 | 132.57%                    | Ctdd D  | D - 61 141             |                          | Dis                            | count Rate Years 11+:          | 7.60%                            |
| Surplus/(Deficit) \$ = PV (F<br>Surplus/(Deficit) \$ as a Per |              |                    |                            | <ul><li>Standard Program</li><li>Standard Program</li></ul> |                        |                          |                                |                                |                                  |
| Fund Balance @ End of Pro                                     |              | remunis).          | 56,966,323,288             | 100.00%   | Dennition              | 100.00%                  |                                |                                |                                  |
| Totals - 7/2011 thru 6/207                                    |              |                    | 5,384,253,976              | 18,545,312,968  | 89,103,160             | 718,072,440              | (13,968,234,593)               | 67,657,773,059                 |                                  |
| As a % of Premiums:   |              |                    | 100.00%                    | 344.44%   | 1.65%                  | 13.34%                   | -259.43%                       | 1256.59%                       |                                  |
|   |              |                    |                            |   |                        |                          |                                |                                |                                  |
| Totals - Present Values:                                      |              |                    | 2,969,921,663              | 5,101,800,543   | 57,961,864             | 281,907,336              | (2,471,748,080)                | 7,253,965,159                  |                                  |
| As a % of PV(Premiums):                                       |              |                    | 100.00%                    | 171.78%   | 1.95%                  | 9.49%                    | -83.23%                        | 244.25%                        |                                  |
|   |              |                    |                            |   |                        |                          |                                |                                |                                  |
| <u>Months</u>   | <u>Year</u>  | <u>Lives</u>       | Total Premiums             | LTC Paid Claims   | RoP Claims             | Total Expenses           | <u>Earnings</u>                | Investment Earnings            | Fund Balance                     |
| 7-12  | 2011         | 152.007            | 1/2 072 421                | 0/ 517 550  | 2 205 144              | 0.075.574                | 64,194,165                     | 100 140 401                    | 3,276,784,822<br>3,443,122,417   |
| 7-12<br>1-12  | 2012         | 152,097<br>147,151 | 163,072,431<br>318,164,587 | 86,517,558<br>189,021,599                                   | 3,385,144<br>6,877,911 | 8,975,564<br>18,106,723  | 104,158,353                    | 102,143,431<br>219,122,561     | 3,766,403,331                    |
| 1-12  | 2012         | 142,144            | 308,839,407                | 213,426,257   | 7,131,568              | 18,664,422               | 69,617,160                     | 238,305,426                    | 4,074,325,917                    |
| 1-12  | 2014         | 137,108            | 299,327,028                | 235,334,300   | 7,164,262              | 19,257,137               | 37,571,329                     | 256,462,600                    | 4,368,359,846                    |
| 1-12  | 2015         | 132,060            | 289,749,669                | 251,509,583   | 6,905,595              | 19,872,062               | 11,462,429                     | 274,028,014                    | 4,653,850,289                    |
| 1-12  | 2016         | 126,997            | 279,978,178                | 270,064,867   | 6,602,089              | 20,507,460               | (17,196,239)                   | 290,985,639                    | 4,927,639,690                    |
| 1-12  | 2017         | 121,895            | 269,879,094                | 289,254,438   | 6,251,385              | 20,992,186               | (46,618,914)                   | 307,161,673                    | 5,188,182,448                    |
| 1-12  | 2018         | 116,754            | 259,473,382                | 306,578,316   | 5,791,071              | 21,418,936               | (74,314,941)                   | 322,559,870                    | 5,436,427,376                    |
| 1-12  | 2019         | 111,611            | 248,802,716                | 323,038,829   | 5,237,754              | 21,801,015               | (101,274,882)                  | 337,231,141                    | 5,672,383,636                    |
| 1-12  | 2020         | 106,492            | 237,851,263                | 338,772,260   | 4,705,188              | 22,157,758               | (127,783,944)                  | 351,108,086                    | 5,895,707,778                    |
| 1-12  | 2021         | 101,405            | 226,680,847                | 351,764,018   | 4,223,224              | 22,506,574               | (151,812,969)                  | 403,268,958                    | 6,147,163,767                    |
| 1-12  | 2022         | 96,334             | 215,355,834                | 366,747,652   | 3,781,155              | 22,805,470               | (177,978,442)                  | 461,163,787                    | 6,430,349,111                    |
| 1-12  | 2023         | 91,276             | 203,919,001                | 385,469,622   | 3,304,504              | 23,026,046               | (207,881,171)                  | 481,554,487                    | 6,704,022,427                    |
| 1-12  | 2024         | 86,258             | 192,461,729                | 404,199,853   | 2,824,821              | 23,166,111               | (237,729,057)                  | 501,207,750                    | 6,967,501,120                    |
| 1-12  | 2025         | 81,313             | 181,029,585                | 424,184,574   | 2,420,642              | 23,243,802               | (268,819,434)                  | 520,058,919                    | 7,218,740,606                    |
| 1-12  | 2026         | 76,450             | 169,670,006                | 446,521,012   | 2,099,236              | 23,274,179               | (302,224,421)                  | 537,889,298                    | 7,454,405,483                    |
| 1-12  | 2027         | 71,662             | 158,438,832                | 468,696,766   | 1,830,785              | 23,225,464               | (335,314,182)                  | 554,523,130                    | 7,673,614,431                    |
| 1-12  | 2028         | 66,943             | 147,385,389                | 487,723,722   | 1,562,862              | 23,062,917               | (364,964,111)                  | 570,021,503                    | 7,878,671,823                    |
| 1-12  | 2029         | 62,313             | 136,534,862                | 503,258,234   | 1,304,049              | 22,781,107               | (390,808,528)                  | 584,591,922                    | 8,072,455,218                    |
| 1-12  | 2030         | 57,800             | 125,914,477                | 518,408,253   | 1,082,387              | 22,396,247               | (415,972,410)                  | 598,356,582                    | 8,254,839,390                    |
| 1-12  | 2031         | 53,415             | 115,558,156                | 535,615,862   | 904,148                | 21,946,275               | (442,908,128)                  | 611,204,085                    | 8,423,135,346                    |
| 1-12  | 2032         | 49,142             | 105,488,447                | 552,972,840   | 772,923                | 21,512,669               | (469,769,986)                  | 622,937,066                    | 8,576,302,426                    |
| 1-12  | 2033         | 44,986             | 95,754,131                 | 564,600,747   | 648,543                | 20,966,321               | (490,461,480)                  | 633,740,391                    | 8,719,581,337                    |
| 1-12  | 2034         | 40,964             | 86,393,199                 | 571,139,340   | 525,129                | 20,284,328               | (505,555,598)                  | 644,010,075                    | 8,858,035,815                    |
| 1-12  | 2035         | 37,103             | 77,420,156                 | 576,251,676   | 409,531                | 19,483,879               | (518,724,929)                  | 654,014,905                    | 8,993,325,791                    |
| 1-12  | 2036         | 33,430             | 68,910,183                 | 581,836,377   | 316,611                | 18,597,270               | (531,840,075)                  | 663,782,645                    | 9,125,268,361                    |
| 1-12  | 2037         | 29,953             | 60,915,989                 | 585,005,880   | 251,461                | 17,643,931               | (541,985,283)                  | 673,379,528                    | 9,256,662,606                    |
| 1-12<br>1-12  | 2038<br>2039 | 26,673<br>23,600   | 53,478,444                 | 580,278,471<br>567,976,195                                  | 199,928<br>154,547     | 16,622,410<br>15,525,727 | (543,622,365)<br>(537,051,174) | 683,222,235<br>694,019,257     | 9,396,262,476<br>9,553,230,559   |
| 1-12  | 2040         | 20,755             | 46,605,295                 | 552,968,752   | 114,800                |                          |                                | 706,295,780                    |                                  |
| 1-12  | 2040         | 18,149             | 40,308,437<br>34,608,997   | 537,984,137   | 83,141                 | 14,380,843<br>13,233,406 | (527,155,958)<br>(516,691,686) | 720,285,655                    | 9,732,370,381<br>9,935,964,350   |
| 1-12  | 2042         | 15,780             | 29,507,354                 | 519,896,936   | 60,918                 | 12,114,719               | (502,565,220)                  | 736,241,684                    | 10,169,640,814                   |
| 1-12  | 2043         | 13,635             | 24,983,848                 | 494,912,960   | 46,636                 | 11,022,323               | (480,998,070)                  | 754,748,558                    | 10,443,391,302                   |
| 1-12  | 2044         | 11,707             | 21,005,380                 | 464,683,744   | 35,563                 | 9,945,761                | (453,659,688)                  | 776,543,967                    | 10,766,275,581                   |
| 1-12  | 2045         | 9,991              | 17,534,354                 | 433,840,860   | 27,277                 | 8,899,456                | (425,233,238)                  | 802,145,283                    | 11,143,187,626                   |
| 1-12  | 2046         | 8,479              | 14,536,729                 | 404,813,040   | 20,400                 | 7,908,781                | (398,205,492)                  | 831,807,834                    | 11,576,789,968                   |
| 1-12  | 2047         | 7,156              | 11,968,635                 | 376,461,029   | 14,846                 | 6,991,022                | (371,498,262)                  | 865,753,852                    | 12,071,045,557                   |
| 1-12  | 2048         | 6,004              | 9,788,959                  | 345,921,866   | 10,735                 | 6,152,813                | (342,296,456)                  | 904,387,651                    | 12,633,136,753                   |
| 1-12  | 2049         | 5,007              | 7,953,002                  | 313,993,522   | 7,551                  | 5,382,555                | (311,430,627)                  | 948,256,601                    | 13,269,962,727                   |
| 1-12  | 2050         | 4,146              | 6,413,530                  | 283,112,352   | 5,022                  | 4,674,219                | (281,378,063)                  | 997,789,979                    | 13,986,374,643                   |
| 1-12  | 2051         | 3,411              | 5,132,219                  | 254,905,188   | 3,205                  | 4,024,994                | (253,801,168)                  | 1,053,287,364                  | 14,785,860,839                   |
| 1-12  | 2052         | 2,789              | 4,073,414                  | 229,976,415   | 2,125                  | 3,438,800                | (229,343,925)                  | 1,114,981,872                  | 15,671,498,787                   |
| 1-12  | 2053         | 2,265              | 3,205,928                  | 205,844,177   | 1,318                  | 2,921,734                | (205,561,301)                  | 1,183,177,975                  | 16,649,115,461                   |
| 1-12  | 2054         | 1,827              | 2,501,976                  | 181,597,792   | 746                    | 2,465,528                | (181,562,091)                  | 1,258,376,287                  | 17,725,929,657                   |
| 1-12  | 2055         | 1,463              | 1,934,894                  | 158,520,921   | 344                    | 2,065,355                | (158,651,725)                  | 1,341,083,096                  | 18,908,361,028                   |
| 1-12  | 2056         | 1,163              | 1,481,609                  | 137,505,350   | 79                     | 1,717,529                | (137,741,350)                  | 1,431,745,189                  | 20,202,364,866                   |
| 1-12  | 2057         | 917                | 1,122,950                  | 118,788,398   | -                      | 1,417,300                | (119,082,748)                  | 1,530,802,852                  | 21,614,084,970                   |
| 1-12  | 2058         | 719                | 842,384                    | 101,981,453   | -                      | 1,160,785                | (102,299,854)                  | 1,638,732,872                  | 23,150,517,988                   |
| 1-12  | 2059         | 559                | 625,497                    | 86,349,612  | -                      | 943,672                  | (86,667,787)                   | 1,756,094,037                  | 24,819,944,237                   |
| 1-12  | 2060         | 432                | 463,561                    | 72,235,753  | -                      | 761,096                  | (72,533,288)                   | 1,883,511,963                  | 26,630,922,912<br>28,592,201,520 |
| 1-12<br>1-12  | 2061<br>2062 | 332<br>254         | 343,789<br>253,048         | 60,071,676<br>49,741,136                                    | -                      | 609,518<br>485,349       | (60,337,405)<br>(49,973,437)   | 2,021,616,013<br>2,171,072,706 | 30,713,300,789                   |
| 1-12  | 2063         | 192                | 184,876                    | 41,008,617  | -                      | 384,223                  | (41,207,964)                   | 2,332,614,411                  | 33,004,707,235                   |
| 1-12  | 2064         | 145                | 134,008                    | 33,691,979  | -                      | 302,335                  | (33,860,305)                   | 2,507,045,287                  | 35,477,892,217                   |
| 1-12  | 2065         | 109                | 96,325                     | 27,600,140  | -                      | 236,608                  | (27,740,423)                   | 2,695,244,002                  | 38,145,395,796                   |
| 1-12  | 2066         | 81                 | 68,703                     | 22,517,933  | -                      | 184,109                  | (22,633,339)                   | 2,898,171,662                  | 41,020,934,119                   |
| 1-12  | 2067         | 60                 | 48,565                     | 18,335,510  | -                      | 142,294                  | (18,429,239)                   | 3,116,875,585                  | 44,119,380,465                   |
| 1-12  | 2068         | 44                 | 33,926                     | 14,810,329  | -                      | 109,433                  | (14,885,836)                   | 3,352,493,875                  | 47,456,988,503                   |
| 1-12  | 2069         | 32                 | 23,332                     | 11,824,691  | -                      | 83,473                   | (11,884,832)                   | 3,606,267,964                  | 51,051,371,636                   |
| 1-12  | 2070         | 23                 | 15,744                     | 9,353,490   | -                      | 62,951                   | (9,400,696)                    | 3,879,537,389                  | 54,921,508,328                   |
| 1-6   | 2071         | 20                 | 5,687                      | 3,894,112   | -                      | 25,469                   | (3,913,894)                    | 2,048,728,854                  | 56,966,323,288                   |
|   |              |                    |                            |   |                        |                          |                                |                                |                                  |

### Attachment A(6) Combination of A(2), A(3), A(4), and A(5)

#### **California Public Employees Retirement System**

Summary of Projected Values All Plans

Annual Discount Rate Years All Years: LTC Program Funded Ratio: 207.79% Surplus/(Deficit) \$ = PV (Fund Balance + Earnings): 1,699,808,330 = Standard Program Definition Surplus/(Deficit) \$ as a Percentage of PV(Premiums) 62.36% = Standard Program Definition Fund Balance @ Fnd of Projection: 152.701.442.004 90.00% 80.00% Totals - 7/2011 thru 6/2071: 5.384.253.976 16,690,781,672 89.103.160 590.756.252 (11.986.387.107) 161.411.044.290 As a % of Premiums: 100.00% 309.99% 10.97% 1.65% -222.62% 2997.83% Totals - Present Values: 2,725,747,380 4,040,014,967 53,749,130 208,959,774 (1,576,976,492) 10,706,240,825 As a % of PV(Premiums) 100.00% 148.22% 1.97% 7.67% -57.85% 392.78% Months Year Lives Total Premiums LTC Paid Claims RoP Claims Total Expenses **Earnings** Investment Earnings Fund Balance 3.276.784.822 7-12 2011 152,097 163,072,431 77,865,803 3,385,144 7,465,698 74,355,786 127,036,042 3,478,176,650 3,880,949,509 1-12 2012 147,151 318,164,587 170,119,440 6,877,911 15,061,100 126,106,137 276,666,722 142,144 308,839,407 192,083,631 7,131,568 15,524,282 94,099,926 306,862,096 4,281,911,531 1-12 2013 1-12 2014 137,108 299,327,028 211,800,870 7,164,262 16,016,236 64,345,660 336,841,914 4,683,099,105 1-12 2015 132.060 289,749,669 226.358.625 6.905.595 16,526,492 39.958.957 367,149,857 5,090,207,919 17 053 676 5.501.308.320 1-12 2016 126 997 279 978 178 243 058 380 6.602.089 13.264.032 397 836 369 121.895 269.879.094 260.328.994 (14.138.499) 5.915.946.340 6.251.385 17.437.214 428.776.519 1-12 2017 259,473,382 17,771,171 460,047,307 1-12 2018 116,754 275,920,485 5,791,071 (40,009,344) 6,335,984,304 290,734,946 1-12 2019 111,611 248,802,716 5.237.754 18,068,181 (65,238,164) 491.784.722 6,762,530,861 106,492 237,851,263 304,895,034 4,705,188 18,343,831 (90,092,790) 523,998,364 7,196,436,435 1-12 2020 1-12 2021 101.405 226,680,847 316,587,616 4,223,224 18,612,132 (112,742,125) 556,891,823 7,640,586,133 1-12 2022 96,334 215,355,834 330,072,887 3,781,155 18,839,479 (137,337,686) 590,584,283 8,093,832,730 1-12 2023 91.276 203.919.001 346.922.660 3.304.504 19.003.006 (165.311.170) 624.805.773 8.553.327.333 192,461,729 363,779,868 9.019.583.697 86.258 2.824.821 19.100.907 (193,243,868) 659.500.231 1-12 2024 181,029,585 381,766,117 2,420,642 19,147,823 (222,304,997) 694,695,834 9,491,974,533 81,313 1-12 2025 1-12 2026 76,450 169,670,006 401,868,911 2,099,236 19,155,950 (253,454,091) 730,285,520 9,968,805,962 158,438,832 421,827,089 19,099,893 (284,318,935) 766,209,224 10,450,696,252 1-12 2027 71,662 1,830,785 66,943 147,385,389 438,951,350 1,562,862 18,951,777 (312,080,599) 802,633,463 10,941,249,116 1-12 2028 1-12 2029 62,313 136,534,862 452,932,411 1,304,049 18,707,215 (336,408,812) 839.868.936 11,444,709,240 1-12 2030 57 800 125.914.477 466.567.428 1.082.387 18.379.301 (360.114.639) 878.157.348 11 962 751 949 115.558.156 482.054.276 1-12 2031 53.415 904.148 17.998.570 (385,398,837) 917.535.481 12.494.888.592 (410,590,300) 49,142 105,488,447 497,675,556 772,923 17,630,267 957,972,134 13,042,270,426 1-12 2032 1-12 2033 44.986 95,754,131 508,140,672 648,543 17,171,008 (430,206,093) 999,800,302 13,611,864,635 1-12 2034 40,964 86,393,199 514,025,406 525,129 16,602,526 (444,759,862) 1,043,560,697 14,210,665,470 15,938,717 1,089,691,236 14,842,802,106 1-12 2035 37,103 77,420,156 518,626,508 409,531 (457,554,599) 1-12 2036 33,430 68,910,183 523,652,739 316,611 15,205,710 (470,264,877) 1,138,423,193 15,510,960,423 1-12 2037 29.953 60,915,989 526,505,292 251,461 14.419.311 (480,260,075) 1,190,039,965 16,220,740,313 522,250,624 511,178,576 1-12 2038 26.673 53,478,444 199.928 13.578.493 (482,550,601) 1,245,166,098 16,983,355,810 (477,405,603) 2039 23,600 46,605,295 154,547 12,677,776 1,304,715,066 17,810,665,273 1-12 20,755 40,308,437 497,671,877 114,800 11,738,949 (469,217,189) 1,369,452,898 18,710,900,982 2040 1-12 1,439,900,115 1-12 2041 18.149 34,608,997 484,185,723 83,141 10,798,846 (460,458,712) 19,690,342,385 467,907,242 9,882,751 1-12 2042 15,780 29.507.354 60.918 (448,343,558) 1,516,619,192 20,758,618,019 2043 13,635 24,983,848 445,421,664 46,636 8,988,795 (429,473,246) 1,600,504,877 21,929,649,649 1-12 1-12 2044 11.707 21,005,380 418.215.369 35.563 8.108.663 (405.354.215) 1,692,621,540 23.216.916.974 9 991 1-12 2045 17 534 354 390.456.774 27 277 7 253 971 (380 203 667) 1 793 861 267 24.630.574.575 364,331,736 20,400 (356,260,531) 1,904,907,528 26,179,221,571 8.479 14.536.729 6.445.124 1-12 2046 338,814,926 2,026,448,404 1-12 2047 7.156 11.968.635 14.846 5.696.004 (332.557.141) 27.873.112.834 2048 6,004 9,788,959 311,329,680 10,735 5,011,906 (306,563,362) 2,159,377,742 29,725,927,215 1-12 2,304,762,302 1-12 2049 5,007 7,953,002 282,594,170 7,551 4,383,495 (279,032,215) 31,751,657,302 2050 4,146 6,413,530 254,801,117 5,022 3,805,856 (252,198,465) 2,463,604,215 33,963,063,052 1-12 1-12 2051 3,411 5,132,219 229,414,669 3,205 3,276,674 (227,562,329) 2,636,833,585 36,372,334,308 1-12 2052 2.789 4,073,414 206,978,773 2,125 2,799,049 (205,706,533) 2,825,370,334 38,991,998,109 1-12 2053 2 265 3 205 928 185 259 759 1.318 2 377 796 (184 432 945) 3 030 255 324 41 837 820 488 2054 1.827 2.501.976 163.438.013 2.006.212 (162.942.996) 3.252.769.862 44.927.647.354 1-12 746 48,279,497,704 1-12 2055 1.463 1,934,894 142,668,829 344 1,680,342 (142,414,621) 3,494,264,971 123,754,815 1-12 2056 1.163 1,481,609 79 1.397.149 (123,670,436) 3,756,106,310 51,911,933,578 1-12 2057 917 1,122,950 106,909,558 1,152,760 (106,939,368) 4,039,728,410 55,844,722,620 1-12 2058 719 842.384 91.783.307 943.995 (91.884.918) 4.346.680.178 60.099.517.880 1-12 2059 559 625,497 77,714,651 767,331 (77,856,484) 4,678,673,252 64,700,334,647 1-12 2060 432 463.561 65,012,177 618,805 (65, 167, 422) 5,037,574,966 69,672,742,191 343.789 54.064.508 495.517 5.425.357.621 75.043.883.575 1-12 2061 332 (54.216.237) 1-12 2062 254 253,048 44,767,022 394,530 (44,908,504) 5,844,137,164 80,843,112,235 1-12 2063 192 184,876 36,907,755 312,291 (37,035,170)6,296,208,295 87,102,285,360 1-12 2064 145 134,008 30,322,781 245,705 (30,434,478) 6,784,059,279 93,855,910,161 2065 109 96,325 24,840,126 192,266 (24,936,067) 7,310,384,511 101,141,358,605 1-12 1-12 2066 81 68,703 20,266,140 149,586 (20,347,023) 7,878,102,679 108,999,114,262 1-12 2067 60 48 565 16.501.959 115 597 (16.568.991) 8.490.371.944 117.472.917.214 9.150.606.777 44 33.926 13.329.296 88.889 (13.384.259)126.610.139.733 1-12 2068 1-12 2069 32 23,332 10,642,222 67,793 (10,686,683) 9,862,503,142 136,461,956,192 1-12 2070 23 15,744 8,418,141 51.121 (8,453,517) 10,630,048,355 147,083,551,030 3,504,701 (3,519,759) 152,701,442,004 1-6 2071 20 5.687 20.745 5.621.410.734

## Attachment A(7) Discount Rate at 5.50% (Represents an Industry Discount Rate)

California Public Employees Retirement System Summary of Projected Values All Plans

|                              |              |                |                        | All P                      | lans           |                        |                                |                                |                                    |
|------------------------------|--------------|----------------|------------------------|----------------------------|----------------|------------------------|--------------------------------|--------------------------------|------------------------------------|
|                              |              |                |                        |                            |                |                        |                                |                                | <u>Annual</u>                      |
|                              |              |                |                        |                            |                |                        | Discour                        | nt Rate Years All Years:       | 5.50%                              |
| LTC Program Funded Ratio     |              |                | 90.69%                 |                            |                |                        |                                |                                |                                    |
| Surplus/(Deficit) \$ = PV (  |              |                |                        | = Standard Program         |                |                        |                                |                                |                                    |
| Surplus/(Deficit) \$ as a Pe |              | remiums):      |                        | = Standard Program         | Definition     | 400.000/               |                                |                                |                                    |
| Fund Balance @ End of Pr     |              |                | (8,557,973,879)        | 100.00%                    |                | 100.00%                |                                |                                |                                    |
| Totals - 7/2011 thru 6/207   | 71:          |                | 5,545,681,269          | 19,529,919,673             | 90,896,489     | 750,438,987            | (14,825,573,880)               | 2,990,815,179                  |                                    |
| As a % of Premiums:          |              |                | 100.00%                | 352.16%                    | 1.64%          | 13.53%                 | -267.34%                       | 53.93%                         |                                    |
| T                            |              |                | 0.000.004.007          | / 500 540 500              |                | 000 101 711            | (0.440.000.040)                | 0.405.074.077                  |                                    |
| Totals - Present Values:     |              |                | 3,282,831,996          | 6,500,513,589              | 62,116,964     | 333,434,711            | (3,613,233,268)                | 3,635,976,877                  |                                    |
| As a % of PV(Premiums):      |              |                | 100.00%                | 198.02%                    | 1.89%          | 10.16%                 | -110.06%                       | 110.76%                        |                                    |
| Manada -                     | V            | Uliver         | Tatal Danielium        | LTO Deld Oleles            | D-D 01-1       | Takal Famous           | Eli                            | laccontact Francisco           | Front Delever                      |
| <u>Months</u>                | <u>Year</u>  | <u>Lives</u>   | Total Premiums         | LTC Paid Claims            | RoP Claims     | Total Expenses         | <u>Earnings</u>                | Investment Earnings            | Fund Balance<br>3,276,784,822      |
| 7-12                         | 2011         | 152,290        | 163,214,995            | 86,518,260                 | 3,387,165      | 8,981,681              | 64,327,889                     | 90,050,168                     | 3,431,162,878                      |
| 1-12                         | 2012         | 147,709        | 319,059,141            | 189,064,343                | 6,895,002      | 18,148,098             | 104,951,698                    | 192,193,938                    | 3,728,308,514                      |
| 1-12                         | 2013         | 143,043        | 310,506,451            | 213,621,901                | 7,167,348      | 18,746,908             | 70,970,294                     | 207,653,567                    | 4,006,932,375                      |
| 1-12                         | 2014         | 138,324        | 301,716,982            | 235,804,779                | 7,218,240      | 19,383,443             | 39,310,519                     | 222,031,768                    | 4,268,274,663                      |
| 1-12                         | 2015         | 133,569        | 292,812,777            | 252,377,141                | 6,975,166      | 20,045,063             | 13,415,407                     | 235,698,156                    | 4,517,388,226                      |
| 1-12                         | 2016         | 128,772        | 283,662,504            | 271,464,517                | 6,685,429      | 20,730,126             | (15,217,569)                   | 248,621,759                    | 4,750,792,417                      |
| 1-12                         | 2017         | 123,912        | 274,128,945            | 291,313,450                | 6,346,259      | 21,274,336             | (44,805,099)                   | 260,631,767                    | 4,966,619,085                      |
| 1-12                         | 2018         | 118,985        | 264,230,361            | 309,404,757                | 5,893,779      | 21,763,059             | (72,831,233)                   | 271,714,438                    | 5,165,502,290                      |
| 1-12                         | 2019         | 114,031        | 254,007,602            | 326,727,442                | 5,344,120      | 22,208,604             | (100,272,564)                  | 281,897,722                    | 5,347,127,447                      |
| 1-12                         | 2020         | 109,076        | 243,443,552            | 343,459,398                | 4,812,904      | 22,630,437             | (127,459,187)                  | 291,103,567                    | 5,510,771,827                      |
| 1-12                         | 2021         | 104,128        | 232,599,901            | 357,608,875                | 4,330,873      | 23,046,183             | (152,386,030)                  | 299,399,020                    | 5,657,784,817                      |
| 1-12                         | 2022         | 99,172         | 221,541,618            | 373,880,074                | 3,887,360      | 23,412,613             | (179,638,430)                  | 306,775,650                    | 5,784,922,037                      |
| 1-12                         | 2023         | 94,202         | 210,311,139            | 393,964,804                | 3,405,930      | 23,700,092             | (210,759,687)                  | 312,914,436                    | 5,887,076,785                      |
| 1-12                         | 2024         | 89,249         | 199,001,068            | 414,108,559                | 2,918,933      | 23,905,755             | (241,932,180)                  | 317,665,716                    | 5,962,810,321                      |
| 1-12                         | 2025         | 84,345         | 187,658,130            | 435,644,456                | 2,507,685      | 24,047,771             | (274,541,782)                  | 320,939,141                    | 6,009,207,680                      |
| 1-12                         | 2026         | 79,502         | 176,331,779            | 459,722,190                | 2,180,288      | 24,141,270             | (309,711,968)                  | 322,526,500                    | 6,022,022,211                      |
| 1-12                         | 2027         | 74,710         | 165,080,604            | 483,751,478                | 1,906,328      | 24,152,780             | (344,729,982)                  | 322,252,389                    | 5,999,544,619                      |
| 1-12                         | 2028         | 69,968         | 153,956,756            | 504,626,657                | 1,631,506      | 24,045,434             | (376,346,841)                  | 320,119,231                    | 5,943,317,008                      |
| 1-12                         | 2029         | 65,294         | 142,987,659            | 521,966,548                | 1,364,822      | 23,812,655             | (404,156,366)                  | 316,236,977                    | 5,855,397,619                      |
| 1-12                         | 2030         | 60,718         | 132,203,311            | 539,004,799                | 1,135,750      | 23,470,506             | (431,407,744)                  | 310,646,066                    | 5,734,635,941                      |
| 1-12                         | 2031         | 56,254         | 121,641,574            | 558,280,229                | 951,176        | 23,058,064             | (460,647,895)                  | 303,206,065                    | 5,577,194,112                      |
| 1-12                         | 2032         | 51,885         | 111,327,765            | 577,770,778                | 815,223        | 22,660,699             | (489,918,935)                  | 293,713,149                    | 5,380,988,326                      |
| 1-12                         | 2033         | 47,618         | 101,314,984            | 591,395,682                | 685,794        | 22,142,029             | (512,908,521)                  | 282,250,018                    | 5,150,329,822                      |
| 1-12                         | 2034         | 43,471         | 91,646,420             | 599,727,318                | 556,720        | 21,476,888             | (530,114,506)                  | 269,055,300                    | 4,889,270,617                      |
| 1-12                         | 2035         | 39,474         | 82,340,290             | 606,614,417                | 435,286        | 20,682,434             | (545,391,847)                  | 254,263,548                    | 4,598,142,317                      |
| 1-12                         | 2036         | 35,657         | 73,479,687             | 614,058,683                | 337,397        | 19,792,076             | (560,708,468)                  | 237,817,863                    | 4,275,251,712                      |
| 1-12                         | 2037         | 32,030         | 65,124,492             | 618,983,471                | 268,664        | 18,825,823             | (572,953,466)                  | 219,687,311                    | 3,921,985,557                      |
| 1-12                         | 2038         | 28,595         | 57,322,422             | 615,518,913                | 214,154        | 17,781,528             | (576,192,173)                  | 200,106,699                    | 3,545,900,083                      |
| 1-12                         | 2039         | 25,365         | 50,086,087             | 603,959,865                | 165,968        | 16,651,118             | (570,690,864)                  | 179,526,355                    | 3,154,735,573                      |
| 1-12                         | 2040         | 22,364         | 43,432,755             | 589,474,789                | 123,600        | 15,462,962             | (561,628,596)                  | 158,240,407                    | 2,751,347,384                      |
| 1-12                         | 2041         | 19,607         | 37,389,850             | 574,966,945                | 89,744         | 14,265,872             | (551,932,712)                  | 136,304,665                    | 2,335,719,337                      |
| 1-12                         | 2042         | 17,091         | 31,962,611             | 557,053,936                | 65,926         | 13,093,630             | (538,250,881)                  | 113,780,951                    | 1,911,249,407                      |
| 1-12                         | 2043         | 14,806         | 27,134,548             | 531,609,781                | 50,599         | 11,943,747             | (516,469,579)                  | 90,979,929                     | 1,485,759,758                      |
| 1-12                         | 2044         | 12,745         | 22,874,351             | 500,375,134                | 38,684         | 10,805,046             | (488,344,513)                  | 68,316,028                     | 1,065,731,273                      |
| 1-12                         | 2045         | 10,905         | 19,145,498             | 468,334,699                | 29,746         | 9,693,356              | (458,912,303)                  | 46,012,202                     | 652,831,172                        |
| 1-12                         | 2046         | 9,279          | 15,914,975             | 438,114,684                | 22,303         | 8,636,619              | (430,858,631)                  | 24,068,811                     | 246,041,353                        |
| 1-12                         | 2047         | 7,851          | 13,138,654             | 408,476,443                | 16,273         | 7,654,212              | (403,008,274)                  | 2,445,696                      | (154,521,225)                      |
| 1-12                         | 2048         | 6,605          | 10,774,947             | 376,289,127                | 11,797         | 6,753,998              | (372,279,974)                  | (18,768,817)                   | (545,570,016)                      |
| 1-12                         | 2049         | 5,521          | 8,777,852              | 342,413,795                | 8,319          | 5,923,852              | (339,568,113)                  | (39,392,485)                   | (924,530,614)                      |
| 1-12<br>1-12                 | 2050<br>2051 | 4,584<br>3,782 | 7,098,066              | 309,513,714<br>279,384,459 | 5,547<br>3,549 | 5,157,676              | (307,578,872)<br>(278,145,237) | (59,359,029)<br>(78,727,237)   | (1,291,468,514)                    |
| 1-12                         | 2052         | 3,762          | 5,695,635              |                            |                | 4,452,864              | (251,999,384)                  |                                | (1,648,340,988)<br>(1,997,971,259) |
| 1-12<br>1-12                 | 2052         | 2,524          | 4,533,153<br>3,577,784 | 252,715,908<br>226,780,559 | 2,359<br>1,467 | 3,814,271<br>3,249,204 | (226,453,446)                  | (97,630,887)<br>(116,169,035)  | (2,340,593,740)                    |
| 1-12                         | 2054         | 2,042          |                        |                            | 833            |                        |                                |                                |                                    |
| 1-12                         | 2055         | 1,639          | 2,800,123              | 200,575,200<br>175,529,878 | 385            | 2,749,026<br>2,308,856 | (200,524,936)                  | (134,308,362)                  | (2,675,427,038)                    |
| 1-12                         | 2056         | 1,306          | 2,171,711<br>1,667,816 | 152,646,166                | 89             | 1,925,041              | (175,667,409)<br>(152,903,480) | (152,040,122)<br>(169,434,195) | (3,003,134,569)<br>(3,325,472,243) |
| 1-12                         | 2057         | 1,033          | 1,267,848              | 132,205,250                | -              | 1,592,690              | (132,530,092)                  | (186,597,525)                  | (3,644,599,860)                    |
| 1-12                         | 2058         | 811            | 953,971                | 113,791,169                |                | 1,307,841              | (114,145,038)                  | (203,641,389)                  | (3,962,386,287)                    |
| 1-12                         | 2059         | 633            | 710,557                | 96,592,605                 |                | 1,065,999              | (96,948,047)                   | (220,646,942)                  | (4,279,981,276)                    |
| 1-12                         | 2060         | 491            | 528,268                | 81,007,025                 |                | 861,999                | (81,340,757)                   | (237,680,771)                  | (4,599,002,803)                    |
| 1-12                         | 2061         | 378            | 393,029                | 67,534,843                 | -              | 692,124                | (67,833,938)                   | (254,849,493)                  | (4,921,686,234)                    |
| 1-12                         | 2062         | 289            | 290,229                | 56,060,128                 | _              | 552,562                | (56,322,462)                   | (272,275,069)                  | (5,250,283,766)                    |
| 1-12                         | 2063         | 220            | 212,735                | 46,332,471                 | _              | 438,570                | (46,558,306)                   | (290,074,582)                  | (5,586,916,654)                    |
| 1-12                         | 2064         | 166            | 154,715                | 38,160,569                 | _              | 345,995                | (38,351,849)                   | (308,359,215)                  | (5,933,627,717)                    |
| 1-12                         | 2065         | 125            | 111,585                | 31,339,195                 | _              | 271,479                | (31,499,089)                   | (327,236,017)                  | (6,292,362,824)                    |
| 1-12                         | 2066         | 93             | 79,863                 | 25,632,598                 | _              | 211,790                | (25,764,525)                   | (346,805,611)                  | (6,664,932,960)                    |
| 1-12                         | 2067         | 69             | 56,654                 | 20,924,166                 | -              | 164,111                | (21,031,622)                   | (367,163,794)                  | (7,053,128,376)                    |
| 1-12                         | 2068         | 51             | 39,726                 | 16,942,992                 | -              | 126,538                | (17,029,804)                   | (388,402,793)                  | (7,458,560,974)                    |
| 1-12                         | 2069         | 37             | 27,430                 | 13,560,292                 | -              | 96,768                 | (13,629,631)                   | (410,606,315)                  | (7,882,796,919)                    |
| 1-12                         | 2070         | 27             | 18,592                 | 10,752,486                 | -              | 73,166                 | (10,807,059)                   | (433,859,884)                  | (8,327,463,862)                    |
| 1-6                          | 2071         | 23             | 6,742                  | 4,484,883                  | -              | 29,652                 | (4,507,793)                    | (226,002,224)                  | (8,557,973,879)                    |
|                              |              |                |                        |                            |                |                        |                                |                                |                                    |

## Attachment A(8) Morbidity 10% Higher

## California Public Employees Retirement System Summary of Projected Values All Plans

| LTC Program Funded Ratio:   |              | 105.65%          |                            |   |                        | Discount Rate Years 1 - 10:<br>Discount Rate Years 11+: |   |                            |                                |
|---|--------------|------------------|----------------------------|---|------------------------|---|---|----------------------------|--------------------------------|
| Surplus/(Deficit) \$ = PV (Fund Balance + Earnings):<br>Surplus/(Deficit) \$ as a Percentage of PV(Premiums): |              |                  |                            | = Standard Program                      |                        |   |   |                            |                                |
| Fund Balance @ End of F   |              | remiums):        | 5.78%<br>11,837,243,190    | = Standard Program<br>110.00%           | Definition             | 100.00%   |   |                            |                                |
| Totals - 7/2011 thru 6/20   | ,            |                  | 5,545,681,269              | 21,482,911,641                          | 90,896,489             | 750,438,987   | (16,778,565,848)                        | 25,339,024,216             |                                |
| As a % of Premiums:   | J/1.         |                  | 100.00%                    | 387.38%                                 | 1.64%                  | 13.53%  | -302.55%                                | 456.91%                    |                                |
| Tatala Danasat Values   |              |                  | 2 020 700 /51              | F 700 011 202                           | E0 000 001             | 200 /10 105   | (2.101.(70.570)                         | F 200 200 220              |                                |
| Totals - Present Values:<br>As a % of PV(Premiums)  | :            |                  | 3,028,780,651<br>100.00%   | 5,782,011,323<br>190.90%                | 58,838,801<br>1.94%    | 289,610,105<br>9.56%                                    | (3,101,679,578)<br>-102.41%             | 5,299,399,230<br>174.97%   |                                |
| <u>Months</u>   | <u>Year</u>  | <u>Lives</u>     | Total Premiums             | LTC Paid Claims                         | RoP Claims             | Total Expenses  | <u>Earnings</u>                         | Investment Earnings        | Fund Balance<br>3,276,784,822  |
| 7-12  | 2011         | 152,290          | 163,214,995                | 95,170,086                              | 3,387,165              | 8,981,681   | 55,676,063                              | 102,014,486                | 3,434,475,371                  |
| 1-12  | 2012         | 147,709          | 319,059,141                | 207,970,778                             | 6,895,002              | 18,148,098  | 86,045,264                              | 218,029,593                | 3,738,550,228                  |
| 1-12  | 2013         | 143,043          | 310,506,451                | 234,984,091                             | 7,167,348              | 18,746,908  | 49,608,104                              | 235,961,473                | 4,024,119,805                  |
| 1-12  | 2014         | 138,324          | 301,716,982                | 259,385,257                             | 7,218,240              | 19,383,443  | 15,730,042                              | 252,659,132                | 4,292,508,978                  |
| 1-12  | 2015         | 133,569          | 292,812,777                | 277,614,855                             | 6,975,166              | 20,045,063  | (11,822,307)                            | 268,580,403                | 4,549,267,074                  |
| 1-12  | 2016         | 128,772          | 283,662,504                | 298,610,969                             | 6,685,429              | 20,730,126  | (42,364,020)                            | 283,687,564                | 4,790,590,618                  |
| 1-12  | 2017         | 123,912          | 274,128,945                | 320,444,795                             | 6,346,259              | 21,274,336  | (73,936,444)                            | 297,768,930                | 5,014,423,104                  |
| 1-12  | 2018         | 118,985          | 264,230,361                | 340,345,233                             | 5,893,779              | 21,763,059  | (103,771,709)                           | 310,807,015                | 5,221,458,409                  |
| 1-12  | 2019         | 114,031          | 254,007,602                | 359,400,186                             | 5,344,120              | 22,208,604  | (132,945,308)                           | 322,836,433                | 5,411,349,534                  |
| 1-12  | 2020         | 109,076          | 243,443,552                | 377,805,338                             | 4,812,904              | 22,630,437  | (161,805,127)                           | 333,760,035                | 5,583,304,442                  |
| 1-12  | 2021         | 104,128          | 232,599,901                | 393,369,763                             | 4,330,873              | 23,046,183  | (188,146,917)                           | 380,360,217                | 5,775,517,741                  |
| 1-12  | 2022         | 99,172           | 221,541,618                | 411,268,082                             | 3,887,360              | 23,412,613  | (217,026,437)                           | 431,484,885                | 5,989,976,189                  |
| 1-12  | 2023         | 94,202           | 210,311,139                | 433,361,284                             | 3,405,930              | 23,700,092  | (250,156,168)                           | 446,533,845                | 6,186,353,867                  |
| 1-12  | 2024         | 89,249           | 199,001,068                | 455,519,415                             | 2,918,933              | 23,905,755  | (283,343,036)                           | 460,188,218                | 6,363,199,049                  |
| 1-12  | 2025         | 84,345           | 187,658,130                | 479,208,902                             | 2,507,685              | 24,047,771  | (318,106,228)                           | 472,320,937                | 6,517,413,759                  |
| 1-12<br>1-12  | 2026<br>2027 | 79,502<br>74,710 | 176,331,779<br>165,080,604 | 505,694,409<br>532,126,626              | 2,180,288<br>1,906,328 | 24,141,270<br>24,152,780                                | (355,684,187)<br>(393,105,130)          | 482,623,942<br>490,831,882 | 6,644,353,514                  |
| 1-12  | 2027         | 69,968           |                            | 555,089,322                             | 1,631,506              |   |   | 490,631,662                | 6,742,080,266                  |
| 1-12  | 2028         | 65,294           | 153,956,756<br>142,987,659 | 574,163,203                             | 1,364,822              | 24,045,434<br>23,812,655                                | (426,809,507)<br>(456,353,021)          | 501,118,353                | 6,812,213,751<br>6,856,979,083 |
| 1-12  | 2030         | 60,718           | 132,203,311                | 592,905,279                             | 1,135,750              | 23,470,506  | (485,308,224)                           | 503,416,960                | 6,875,087,820                  |
| 1-12  | 2030         | 56,254           | 121,641,574                | 614,108,252                             | 951,176                | 23,058,064  | (516,475,918)                           | 503,623,934                | 6,862,235,835                  |
| 1-12  | 2032         | 51,885           | 111,327,765                | 635,547,856                             | 815,223                | 22,660,699  | (547,696,013)                           | 501,423,345                | 6,815,963,168                  |
| 1-12  | 2033         | 47,618           | 101,314,984                | 650,535,250                             | 685,794                | 22,142,029  | (572,048,089)                           | 496,926,373                | 6,740,841,451                  |
| 1-12  | 2034         | 43,471           | 91,646,420                 | 659,700,050                             | 556,720                | 21,476,888  | (590,087,238)                           | 490,482,452                | 6,641,236,666                  |
| 1-12  | 2035         | 39,474           | 82,340,290                 | 667,275,859                             | 435,286                | 20,682,434  | (606,053,289)                           | 482,289,689                | 6,517,473,066                  |
| 1-12  | 2036         | 35,657           | 73,479,687                 | 675,464,551                             | 337,397                | 19,792,076  | (622,114,337)                           | 472,258,667                | 6,367,617,396                  |
| 1-12  | 2037         | 32,030           | 65,124,492                 | 680,881,818                             | 268,664                | 18,825,823  | (634,851,813)                           | 460,336,421                | 6,193,102,005                  |
| 1-12  | 2038         | 28,595           | 57,322,422                 | 677,070,805                             | 214,154                | 17,781,528  | (637,744,065)                           | 446,871,735                | 6,002,229,675                  |
| 1-12  | 2039         | 25,365           | 50,086,087                 | 664,355,852                             | 165,968                | 16,651,118  | (631,086,850)                           | 432,548,289                | 5,803,691,113                  |
| 1-12  | 2040         | 22,364           | 43,432,755                 | 648,422,268                             | 123,600                | 15,462,962  | (620,576,075)                           | 417,827,284                | 5,600,942,322                  |
| 1-12  | 2041         | 19,607           | 37,389,850                 | 632,463,639                             | 89,744                 | 14,265,872  | (609,429,406)                           | 402,817,976                | 5,394,330,892                  |
| 1-12  | 2042         | 17,091           | 31,962,611                 | 612,759,329                             | 65,926                 | 13,093,630  | (593,956,274)                           | 387,641,755                | 5,188,016,373                  |
| 1-12  | 2043         | 14,806           | 27,134,548                 | 584,770,759                             | 50,599                 | 11,943,747  | (569,630,557)                           | 372,802,386                | 4,991,188,202                  |
| 1-12  | 2044         | 12,745           | 22,874,351                 | 550,412,647                             | 38,684                 | 10,805,046  | (538,382,026)                           | 358,974,550                | 4,811,780,725                  |
| 1-12  | 2045         | 10,905           | 19,145,498                 | 515,168,168                             | 29,746                 | 9,693,356   | (505,745,772)                           | 346,559,210                | 4,652,594,163                  |
| 1-12  | 2046         | 9,279            | 15,914,975                 | 481,926,152                             | 22,303                 | 8,636,619   | (474,670,099)                           | 335,630,959                | 4,513,555,022                  |
| 1-12  | 2047         | 7,851            | 13,138,654                 | 449,324,087                             | 16,273                 | 7,654,212   | (443,855,918)                           | 326,208,353                | 4,395,907,457                  |
| 1-12  | 2048         | 6,605            | 10,774,947                 | 413,918,039                             | 11,797                 | 6,753,998   | (409,908,887)                           | 318,510,223                | 4,304,508,793                  |
| 1-12  | 2049         | 5,521            | 8,777,852                  | 376,655,174                             | 8,319                  | 5,923,852   | (373,809,493)                           | 312,908,245                | 4,243,607,545                  |
| 1-12  | 2050         | 4,584            | 7,098,066                  | 340,465,086                             | 5,547                  | 5,157,676   | (338,530,243)                           | 309,611,363                | 4,214,688,665                  |
| 1-12  | 2051         | 3,782            | 5,695,635                  | 307,322,905                             | 3,549                  | 4,452,864   | (306,083,682)                           | 308,648,969                | 4,217,253,951                  |
| 1-12  | 2052         | 3,100            | 4,533,153                  | 277,987,499                             | 2,359                  | 3,814,271   | (277,270,975)                           | 309,943,729                | 4,249,926,705                  |
| 1-12  | 2053         | 2,524            | 3,577,784                  | 249,458,615                             | 1,467                  | 3,249,204   | (249,131,502)                           | 313,476,282                | 4,314,271,485                  |
| 1-12  | 2054         | 2,042            | 2,800,123                  | 220,632,720                             | 833                    | 2,749,026   | (220,582,456)                           | 319,435,726                | 4,413,124,755                  |
| 1-12  | 2055         | 1,639            | 2,171,711                  | 193,082,866                             | 385                    | 2,308,856   | (193,220,396)                           | 327,985,901                | 4,547,890,259                  |
| 1-12  | 2056         | 1,306            | 1,667,816                  | 167,910,783                             | 89                     | 1,925,041   | (168,168,096)                           | 339,182,962                | 4,718,905,125                  |
| 1-12  | 2057         | 1,033            | 1,267,848                  | 145,425,775                             | -                      | 1,592,690   | (145,750,617)                           | 353,036,880                | 4,926,191,389                  |
| 1-12  | 2058         | 811              | 953,971                    | 125,170,286                             | -                      | 1,307,841   | (125,524,155)                           | 369,560,747                | 5,170,227,981                  |
| 1-12  | 2059         | 633              | 710,557                    | 106,251,865                             | -                      | 1,065,999   | (106,607,308)                           | 388,823,781                | 5,452,444,454                  |
| 1-12  | 2060         | 491              | 528,268                    | 89,107,728                              | -                      | 861,999   | (89,441,459)                            | 410,929,616                | 5,773,932,611                  |
| 1-12  | 2061         | 378              | 393,029                    | 74,288,327<br>61,666,141                | -                      | 692,124   | (74,587,422)                            | 435,934,532                | 6,135,279,721                  |
| 1-12<br>1-12  | 2062         | 289              | 290,229<br>212,735         |   | -                      | 552,562<br>438 570                                      | (61,928,475)<br>(51,101,553)            | 463,884,697<br>494,847,422 | 6,537,235,943                  |
| 1-12<br>1-12  | 2063         | 220<br>166       | 212,735<br>154 715         | 50,965,718                              | -                      | 438,570<br>345,005                                      | (51,191,553)                            |                            | 6,980,891,812                  |
| 1-12  | 2064         | 166<br>125       | 154,715                    | 41,976,626                              | -                      | 345,995   | (42,167,906)                            | 528,913,907<br>566,197,869 | 7,467,637,813<br>7,999,202,674 |
| 1-12<br>1-12  | 2065         | 125<br>93        | 111,585<br>79,863          | 34,473,114                              | -                      | 271,479<br>211,790                                      | (34,633,009)                            | 606,840,393                | 7,999,202,674<br>8,577,715,282 |
| 1-12  | 2066<br>2067 | 93<br>69         | 79,863<br>56,654           | 28,195,857<br>23,016,583                | -                      | 164,111   | (28,327,785)<br>(23,124,039)            | 651,009,047                | 9,205,600,291                  |
| 1-12  | 2068         | 51               | 39,726                     | 18,637,291                              | -                      | 126,538   | (18,724,103)                            | 698,897,548                | 9,885,773,736                  |
| 1-12  | 2069         | 37               | 27,430                     | 14,916,322                              | -                      | 96,768  | (14,985,660)                            | 750,735,016                | 10,621,523,092                 |
| 1-12  | 2070         | 27               | 18,592                     | 11,827,734                              | -                      | 73,166  | (11,882,308)                            | 806,772,230                | 11,416,413,014                 |
| 1-6   | 2071         | 23               | 6,742                      | 4,933,371                               | _                      | 29,652  | (4,956,281)                             | 425,786,457                | 11,837,243,190                 |
|   | 207.         | 23               | 5,, 12                     | .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |                        | 27,002  | (.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | 3[,00],07                  | , ,                            |

<u>Annual</u>

### Attachment A(9) Expenses 20% Higher

#### **California Public Employees Retirement System**

Summary of Projected Values
All Plans

Discount Rate Years 1 - 10: 6.25% LTC Program Funded Ratio 124.76% Discount Rate Years 11+: 7.60% Surplus/(Deficit) \$ = PV (Fund Balance + Earnings) 650,371,099 = Standard Program Definition Surplus/(Deficit) \$ as a Percentage of PV(Premiums) 21.47% = Standard Program Definition Fund Balance @ Fnd of Projection: 45.884.777.214 100.00% 120.00% Totals - 7/2011 thru 6/2071: 5.545.681.269 19.529.919.673 90.896.489 883.788.813 (14.958.923.706) 57.566.916.098 As a % of Premiums: 100.00% 352.16% 1.64% 15.94% -269.74% 1038.05% Totals - Present Values: 3,028,780,651 5,256,373,930 58,838,801 339,981,642 (2,626,413,722) 6,836,540,945 As a % of PV(Premiums): 100.00% 173.55% 1.94% 11.23% -86.72% 225.72% Months Year Lives Total Premiums LTC Paid Claims RoP Claims Total Expenses **Earnings** Investment Earnings Fund Balance 3.276.784.822 7-12 2011 163,214,995 86,518,260 3,387,165 10,492,770 62,816,800 102,122,541 3,441,724,162 152,290 1-12 2012 147,709 319,059,141 189,064,343 6,895,002 21,201,997 101,897,799 218,965,029 3,762,586,990 143,043 310,506,451 213,621,901 7,167,348 21,903,545 67,813,657 238,013,317 4,068,413,965 1-12 2013 1-12 2014 138,324 301,716,982 235,804,779 7,218,240 22,649,605 36,044,357 256,050,178 4,360,508,501 1-12 2015 133.569 292.812.777 252,377,141 6,975,166 23,425,233 10,035,237 273,499,716 4,644,043,454 (18 715 886) 4 915 661 927 1-12 2016 128 772 283.662.504 271.464.517 6.685.429 24 228 444 290.334.359 6.346.259 24.884.247 2017 123.912 274.128.945 291.313.450 (48,415,011) 306.368.096 5.173.615.013 1-12 309,404,757 1-12 2018 118,985 264,230,361 5,893,779 25,476,565 (76,544,740) 321,592,759 5,418,663,032 5,650,628,717 1-12 2019 114.031 254.007.602 326,727,442 5.344.120 26,018,321 (104,082,281) 336.047.966 243,443,552 343,459,398 4,812,904 26,532,765 (131,361,515) 349,653,638 5,868,920,839 1-12 2020 109,076 1-12 2021 104.128 232.599.901 357,608,875 4,330,873 27.040.968 (156,380,816) 401.270.384 6,113,810,408 1-12 2022 99,172 221,541,618 373,880,074 3,887,360 27,491,077 (183,716,894) 458,436,688 6,388,530,202 1-12 2023 94.202 210.311.139 393.964.804 3.405.930 27.847.685 (214.907.281) 478.136.837 6.651.759.758 414.108.559 28.107.420 199.001.068 2.918.933 (246,133,845) 496.945.679 6.902.571.593 1-12 2024 89.249 84,345 187,658,130 435,644,456 2,507,685 28,291,957 (278,785,968) 514,777,343 1-12 2025 7,138,562,968 1-12 2026 79,502 176,331,779 459,722,190 2,180,288 28,419,309 (313,990,007) 531,382,973 7,355,955,934 165,080,604 483,751,478 28,449,291 (349,026,492) 546,555,670 7,553,485,112 1-12 2027 74,710 1,906,328 2028 69,968 153,956,756 504,626,657 1,631,506 28,337,754 (380,639,161) 560,332,460 7,733,178,411 1-12 1-12 2029 65,294 142,987,659 521,966,548 1,364,822 28,076,858 (408,420,569) 572,902,206 7,897,660,047 1-12 2030 60.718 132.203.311 539 004 799 1.135.750 27.685.758 (435,622,996) 584.364.147 8.046.401.198 27.211.164 1-12 2031 56.254 121.641.574 558.280.229 951,176 (464,800,995) 594.571.553 8.176.171.756 111,327,765 51,885 577,770,778 815,223 26,755,460 (494,013,696) 603,287,966 8,285,446,026 1-12 2032 1-12 2033 47,618 101,314,984 591,395,682 685,794 26,155,095 (516,921,588) 610,670,180 8,379,194,619 1-12 2034 43,471 91,646,420 599,727,318 556,720 25,379,820 (534,017,438) 617,098,457 8,462,275,639 39,474 24,450,075 622,820,397 8,535,936,547 1-12 2035 82,340,290 606,614,417 435,286 (549, 159, 489) 1-12 2036 35,657 73,479,687 614,058,683 337,397 23,405,653 (564,322,046) 627,826,977 8,599,441,479 1-12 2037 32.030 65,124,492 618,983,471 268,664 22,270,288 (576,397,931) 632,147,662 8,655,191,210 (579,451,909) 21.041.264 1-12 2038 28.595 57.322.422 615,518,913 214.154 636,183,188 8.711.922.488 603,959,865 165,968 1-12 2039 25,365 50,086,087 19,708,783 (573,748,528) 640,645,697 8,778,819,657 43,432,755 589,474,789 18,306,650 (564,472,284) 646,051,884 8,860,399,257 2040 22.364 123,600 1-12 1-12 2041 19,607 37,389,850 574,966,945 89,744 16,893,102 (554,559,941) 652,605,139 8,958,444,455 9,078,305,704 1-12 2042 17.091 31.962.611 557,053,936 65.926 15,508,413 (540,665,664) 660.526.913 1-12 2043 14,806 27,134,548 531,609,781 50,599 14,149,485 (518,675,317) 670,394,313 9,230,024,700 1-12 2044 12.745 22,874,351 500.375.134 38.684 12.802.842 (490,342,310) 682,949,041 9,422,631,431 9 660 618 587 1-12 2045 10 905 19 145 498 468.334.699 29 746 11.487.386 (460,706,333) 698 693 489 22,303 10,236,523 9,946,003,043 9.279 15.914.975 (432.458.535) 717.842.990 1-12 2046 438.114.684 1-12 2047 7.851 13.138.654 408.476.443 16.273 9.073.438 (404.427.499) 740.572.437 10.282.147.981 1-12 6,605 10,774,947 376,289,127 11,797 8,007,567 (373,533,543) 767,250,068 10,675,864,506 2048 1-12 2049 5,521 8,777,852 342,413,795 8,319 7,024,410 (340,668,671) 798,395,800 11,133,591,635 1-12 2050 4,584 7,098,066 309,513,714 5,547 6,116,740 (308,537,935) 834,395,326 11,659,449,026 1-12 2051 3,782 5,695,635 279,384,459 3,549 5,281,490 (278,973,863) 875.485.704 12,255,960,867 1-12 2052 3,100 4,533,153 252,715,908 2,359 4,524,517 (252,709,630)921,822,790 12,925,074,027 1-12 2053 2 5 2 4 3 577 784 226 780 559 1,467 3 854 650 (227 058 893) 973.631.771 13.671.646.905 14,501,955,074 2054 2.042 2.800.123 200.575.200 833 3.261.612 (201.037.522) 1.031.345.691 1-12 1-12 2055 1,639 2.171.711 175,529,878 385 2,739,641 (176,098,193) 1,095,394,419 15,421,251,300 16,434,119,586 1-12 2056 1.306 1,667,816 152,646,166 89 2.284.442 (153.262.881) 1,166,131,167 1-12 2057 1,033 1,267,848 132,205,250 1,890,225 (132,827,627) 1,243,890,064 17,545,182,023 1-12 2058 811 953.971 113.791.169 1.552.306 (114.389.503) 1.329.032.748 18.759.825.268 1-12 2059 633 710,557 96,592,605 1,265,370 (97,147,418) 1,421,998,419 20,084,676,269 1-12 2060 491 528.268 81,007,025 1,023,291 (81,502,048) 1,523,286,189 21,526,460,410 23,091,879,832 2061 378 393.029 67.534.843 821.684 (67.963.498) 1.633.382.920 1-12 1-12 289 290,229 56,060,128 656,045 (56,425,945) 1,752,799,340 24,788,253,227 2062 1-12 2063 220 212,735 46,332,471 520,744 (46,640,480) 1,882,101,053 26,623,713,801 1-12 2064 166 154,715 38,160,569 410,855 (38,416,709) 2,021,913,773 28,607,210,864 2065 125 111,585 31,339,195 322,398 (31,550,008) 2,172,924,974 30,748,585,830 1-12 1-12 2066 93 79,863 25,632,598 251,536 (25,804,271) 2,335,891,440 33,058,672,999 1-12 2067 69 56.654 20 924 166 194 925 (21.062.437) 2.511.641.850 35 549 252 412 16.942.992 2,701,080,079 51 39.726 150.312 (17.053.579)38.233.278.913 1-12 2068 1-12 2069 37 27,430 13,560,292 114,960 (13,647,823) 2,905,197,536 41,124,828,627 1-12 2070 27 18,592 10,752,486 86,926 (10,820,819) 3,125,064,865 44,239,072,673

35.157

(4.513.299)

4,484,883

6.742

23

2071

1-6

45,884,777,214

1,650,217,840

Annual

## Attachment A(10) Lapses .25% Lower

California Public Employees Retirement System Summary of Projected Values All Plans

|   |              |                    |                            |   |                        |                          |                                |  | <u>Annual</u>                    |
|---|--------------|--------------------|----------------------------|---|------------------------|--------------------------|--------------------------------|--|----------------------------------|
|   |              |                    |                            |   |                        |                          |                                | ount Rate Years 1 - 10:<br>count Rate Years 11+: | 6.25%                            |
| LTC Program Funded Ratio:   |              |                    | 121.97%                    | 0   | 5 6 111                | Dis                      | 7.60%                          |  |                                  |
| Surplus/(Deficit) \$ = PV (For Surplus/(Deficit) \$ as a Perconstant of the Surplus (Deficit) \$ as a Perconstant |              |                    |                            | <ul><li>Standard Program</li><li>Standard Program</li></ul> |                        |                          |                                |  |                                  |
| Fund Balance @ End of Proj  |              | Terniums).         | 41,572,448,521             | 100.00%   | Delimition             | 100.00%                  |                                |  |                                  |
| Totals - 7/2011 thru 6/2071   |              |                    | 5,714,328,557              | 20,582,978,919  | 92,743,140             | 784,804,998              | (15,746,198,501)               | 54,041,862,200                                   |                                  |
| As a % of Premiums:   |              |                    | 100.00%                    | 360.20%   | 1.62%                  | 13.73%                   | -275.56%                       | 945.73%  |                                  |
| Totals - Present Values:  |              |                    | 3,089,486,819              | 5,418,684,262   | 59,735,693             | 297,646,010              | (2,686,579,146)                | 6,760,209,916                                    |                                  |
| As a % of PV(Premiums):   |              |                    | 100.00%                    | 175.39%   | 1.93%                  | 9.63%                    | -86.96%                        | 218.81%  |                                  |
| <u>Months</u>   | <u>Year</u>  | <u>Lives</u>       | Total Premiums             | LTC Paid Claims   | RoP Claims             | Total Expenses           | <u>Earnings</u>                | Investment Earnings                              | Fund Balance<br>3,276,784,822    |
| 7-12  | 2011         | 152,481            | 163,357,347                | 86,518,961  | 3,389,183              | 8,987,789                | 64,461,415                     | 102,147,532                                      | 3,443,393,769                    |
| 1-12  | 2012         | 148,268            | 319,954,080                | 189,107,055   | 6,912,096              | 18,189,490               | 105,745,439                    | 219,185,903                                      | 3,768,325,110                    |
| 1-12  | 2013         | 143,946            | 312,178,277                | 213,817,710   | 7,203,222              | 18,829,628               | 72,327,717                     | 238,511,219                                      | 4,079,164,046                    |
| 1-12  | 2014         | 139,548            | 304,119,788                | 236,276,467   | 7,272,492              | 19,510,422               | 41,060,406                     | 256,878,914                                      | 4,377,103,366                    |
| 1-12<br>1-12  | 2015<br>2016 | 135,090<br>130,568 | 295,900,125<br>287,385,386 | 253,248,529<br>272,873,048                                  | 7,045,264<br>6,769,612 | 20,219,421<br>20,955,104 | 15,386,910<br>(13,212,378)     | 274,706,166<br>291,957,513                       | 4,667,196,443<br>4,945,941,577   |
| 1-12  | 2016         | 125,956            | 278,434,160                | 293,389,619   | 6,442,333              | 21,560,035               | (42,957,828)                   | 308,437,262                                      | 5,211,421,012                    |
| 1-12  | 2018         | 121,253            | 269,061,545                | 312,260,481   | 5,998,047              | 22,112,304               | (71,309,288)                   | 324,127,261                                      | 5,464,238,986                    |
| 1-12  | 2019         | 116,498            | 259,307,110                | 330,461,919   | 5,452,375              | 22,623,239               | (99,230,423)                   | 339,057,961                                      | 5,704,066,524                    |
| 1-12  | 2020         | 111,716            | 249,151,977                | 348,214,973   | 4,922,809              | 23,112,448               | (127,098,252)                  | 353,138,697                                      | 5,930,106,969                    |
| 1-12  | 2021         | 106,917            | 238,657,243                | 363,552,180   | 4,440,988              | 23,597,795               | (152,933,719)                  | 405,646,661                                      | 6,182,819,910                    |
| 1-12  | 2022         | 102,085            | 227,888,029                | 381,148,865   | 3,996,272              | 24,034,798               | (181,291,907)                  | 463,792,836                                      | 6,465,320,839                    |
| 1-12  | 2023         | 97,214             | 216,885,958                | 402,641,807   | 3,510,204              | 24,392,561               | (213,658,614)                  | 484,041,634                                      | 6,735,703,860                    |
| 1-12  | 2024         | 92,335             | 205,744,423                | 424,252,123   | 3,015,934              | 24,667,518               | (246,191,152)                  | 503,346,477                                      | 6,992,859,184                    |
| 1-12<br>1-12  | 2025<br>2026 | 87,481<br>82,666   | 194,510,887<br>183,236,443 | 447,403,144<br>473,299,828                                  | 2,597,628<br>2,264,253 | 24,877,866<br>25,038,797 | (280,367,751)<br>(317,366,434) | 521,605,015<br>538,543,887                       | 7,234,096,449<br>7,455,273,902   |
| 1-12  | 2027         | 77,881             | 171,982,101                | 499,272,513   | 1,984,786              | 25,036,747               | (354,390,272)                  | 553,930,659                                      | 7,654,814,289                    |
| 1-12  | 2028         | 73,121             | 160,802,530                | 522,094,383   | 1,702,982              | 25,067,591               | (388,062,427)                  | 567,783,201                                      | 7,834,535,063                    |
| 1-12  | 2029         | 68,409             | 149,727,087                | 541,345,479   | 1,428,263              | 24,888,541               | (417,935,195)                  | 580,276,702                                      | 7,996,876,570                    |
| 1-12  | 2030         | 63,776             | 138,788,287                | 560,390,741   | 1,191,599              | 24,593,779               | (447,387,832)                  | 591,492,684                                      | 8,140,981,422                    |
| 1-12  | 2031         | 59,237             | 128,027,770                | 581,870,930   | 1,000,523              | 24,223,535               | (479,067,218)                  | 601,255,009                                      | 8,263,169,213                    |
| 1-12  | 2032         | 54,774             | 117,473,434                | 603,645,835   | 859,722                | 23,867,227               | (510,899,351)                  | 609,296,719                                      | 8,361,566,581                    |
| 1-12  | 2033         | 50,397             | 107,182,613                | 619,422,615   | 725,082                | 23,380,794               | (536,345,878)                  | 615,755,419                                      | 8,440,976,122                    |
| 1-12  | 2034         | 46,125             | 97,203,711                 | 629,702,141   | 590,124                | 22,736,613               | (555,825,168)                  | 621,002,975                                      | 8,506,153,929                    |
| 1-12  | 2035         | 41,990             | 87,558,634                 | 638,528,420   | 462,590                | 21,951,723               | (573,384,099)                  | 625,273,552                                      | 8,558,043,382                    |
| 1-12<br>1-12  | 2036<br>2037 | 38,027<br>34,245   | 78,338,677<br>69,611,210   | 648,012,278<br>654,876,736                                  | 359,489<br>286,995     | 21,060,626<br>20,083,870 | (591,093,717)<br>(605,636,391) | 628,529,786<br>630,774,406                       | 8,595,479,451<br>8,620,617,466   |
| 1-12  | 2037         | 30,650             | 61,431,170                 | 652,837,949   | 229,352                | 19,018,492               | (610,654,623)                  | 632,404,829                                      | 8,642,367,672                    |
| 1-12  | 2039         | 27,258             | 53,816,329                 | 642,158,876   | 178,200                | 17,855,164               | (606,375,911)                  | 634,151,544                                      | 8,670,143,304                    |
| 1-12  | 2040         | 24,095             | 46,789,724                 | 628,324,228   | 133,049                | 16,623,678               | (598,291,231)                  | 636,538,212                                      | 8,708,390,286                    |
| 1-12  | 2041         | 21,178             | 40,385,606                 | 614,423,284   | 96,854                 | 15,376,169               | (589,510,700)                  | 639,754,397                                      | 8,758,633,983                    |
| 1-12  | 2042         | 18,508             | 34,614,563                 | 596,796,208   | 71,332                 | 14,149,039               | (576,402,016)                  | 644,009,708                                      | 8,826,241,675                    |
| 1-12  | 2043         | 16,074             | 29,463,668                 | 570,956,975   | 54,888                 | 12,939,733               | (554,487,928)                  | 649,897,280                                      | 8,921,651,028                    |
| 1-12  | 2044         | 13,872             | 24,903,721                 | 538,738,168   | 42,070                 | 11,736,254               | (525,612,770)                  | 658,189,029                                      | 9,054,227,287                    |
| 1-12  | 2045         | 11,900             | 20,899,552                 | 505,502,729   | 32,432                 | 10,555,924               | (495,191,533)                  | 669,399,350                                      | 9,228,435,104                    |
| 1-12  | 2046         | 10,151             | 17,419,464                 | 474,089,014   | 24,378                 | 9,429,452                | (466,123,380)                  | 683,731,730                                      | 9,446,043,454                    |
| 1-12<br>1-12  | 2047<br>2048 | 8,611<br>7,263     | 14,419,251<br>11,857,015   | 443,149,471<br>409,259,719                                  | 17,832<br>12,960       | 8,378,492<br>7,412,261   | (437,126,544)<br>(404,827,925) | 701,344,409<br>722,604,587                       | 9,710,261,320<br>10,028,037,981  |
| 1-12  | 2049         | 6,088              | 9,685,517                  | 373,347,231   | 9,162                  | 6,518,078                | (370,188,955)                  | 748,043,403                                      | 10,405,892,429                   |
| 1-12  | 2050         | 5,068              | 7,853,368                  | 338,321,440   | 6,125                  | 5,689,785                | (336,163,982)                  | 778,043,169                                      | 10,847,771,616                   |
| 1-12  | 2051         | 4,191              | 6,318,989                  | 306,162,379   | 3,928                  | 4,925,014                | (304,772,332)                  | 812,820,281                                      | 11,355,819,564                   |
| 1-12  | 2052         | 3,444              | 5,043,196                  | 277,654,922   | 2,618                  | 4,229,675                | (276,844,018)                  | 852,497,243                                      | 11,931,472,789                   |
| 1-12  | 2053         | 2,812              | 3,991,470                  | 249,800,921   | 1,633                  | 3,612,445                | (249,423,528)                  | 897,268,008                                      | 12,579,317,269                   |
| 1-12  | 2054         | 2,280              | 3,132,738                  | 221,494,197   | 929                    | 3,064,310                | (221,426,698)                  | 947,551,469                                      | 13,305,442,040                   |
| 1-12  | 2055         | 1,835              | 2,436,653                  | 194,326,245   | 431                    | 2,580,365                | (194,470,387)                  | 1,003,758,025                                    | 14,114,729,678                   |
| 1-12  | 2056         | 1,466              | 1,876,736                  | 169,420,398   | 100                    | 2,157,023                | (169,700,785)                  | 1,066,207,298                                    | 15,011,236,191                   |
| 1-12  | 2057         | 1,163              | 1,430,893                  | 147,107,396   | -                      | 1,789,274                | (147,465,777)                  | 1,135,191,038                                    | 15,998,961,452                   |
| 1-12<br>1-12  | 2058<br>2059 | 916<br>716         | 1,079,904<br>806,841       | 126,941,822<br>108,027,372                                  | -                      | 1,473,096<br>1,203,823   | (127,335,014)<br>(108,424,355) | 1,211,024,050<br>1,294,099,800                   | 17,082,650,487<br>18,268,325,933 |
| 1-12  | 2060         | 557                | 601,737                    | 90,823,296  | -                      | 975,980                  | (91,197,540)                   | 1,384,870,412                                    | 19,561,998,805                   |
| 1-12  | 2061         | 430                | 449,109                    | 75,908,041  | -                      | 785,680                  | (76,244,613)                   | 1,483,764,853                                    | 20,969,519,045                   |
| 1-12  | 2062         | 330                | 332,705                    | 63,167,243  | -                      | 628,883                  | (63,463,421)                   | 1,591,228,606                                    | 22,497,284,230                   |
| 1-12  | 2063         | 252                | 244,662                    | 52,335,097  | -                      | 500,440                  | (52,590,876)                   | 1,707,757,815                                    | 24,152,451,169                   |
| 1-12  | 2064         | 191                | 178,519                    | 43,211,384  | -                      | 395,828                  | (43,428,693)                   | 1,833,904,322                                    | 25,942,926,797                   |
| 1-12  | 2065         | 144                | 129,184                    | 35,575,996  | -                      | 311,383                  | (35,758,195)                   | 1,970,276,833                                    | 27,877,445,436                   |
| 1-12  | 2066         | 108                | 92,775                     | 29,170,706  | -                      | 243,547                  | (29,321,479)                   | 2,117,548,794                                    | 29,965,672,751                   |
| 1-12  | 2067         | 80                 | 66,046                     | 23,872,128  | -                      | 189,206                  | (23,995,288)                   | 2,276,460,416                                    | 32,218,137,878                   |
| 1-12  | 2068         | 59                 | 46,481                     | 19,377,645  | -                      | 146,263                  | (19,477,427)                   | 2,447,821,433                                    | 34,646,481,884                   |
| 1-12  | 2069         | 43                 | 32,222                     | 15,546,465<br>12,357,348                                    | -                      | 112,141                  | (15,626,384)                   | 2,632,524,130                                    | 37,263,379,630                   |
| 1-12<br>1-6   | 2070<br>2071 | 31<br>27           | 21,935<br>7,985            | 5,163,846   | -                      | 85,006<br>34,508         | (12,420,420)<br>(5,190,370)    | 2,831,532,537<br>1,495,147,144                   | 40,082,491,747<br>41,572,448,521 |
| 1-0   | 20/1         | ۷.                 | 7,700                      | 5,105,040   | -                      | 34,300                   | (5,170,570)                    | 1,475,147,144                                    | 11,012,770,021                   |

## Attachment A(11) Combination of A(7), A(8), A(9), and A(10)

#### **California Public Employees Retirement System**

Summary of Projected Values All Plans

Annual Discount Rate Years All Years: 5.50% LTC Program Funded Ratio 72.51% Surplus/(Deficit) \$ = PV (Fund Balance + Earnings) (1,242,362,382) = Standard Program Definition Surplus/(Deficit) \$ as a Percentage of PV(Premiums) -37.04% = Standard Program Definition Fund Balance @ Fnd of Projection: (31.110.980.708) 110.00% 120.00% Totals - 7/2011 thru 6/2071: 5.714.328.557 22.641.276.811 92.743.140 924.566.905 (17.944.258.299) (16.443.507.231) As a % of Premiums: 16.18% -314.02% 100.00% 396.22% 1.62% -287.76% Totals - Present Values: 3,354,136,743 7,406,186,297 63,111,478 403,986,171 (4,519,147,203) 1,667,363,331 As a % of PV(Premiums): 100.00% 220.81% 1.88% 12.04% -134.73% 49.71% Months Year Lives Total Premiums LTC Paid Claims RoP Claims Total Expenses **Earnings** Investment Earnings Fund Balance 3.276.784.822 7-12 2011 152,481 163,357,347 95,170,857 3,389,183 10,500,099 54,297,208 89,916,173 3,420,998,203 1-12 2012 148,268 319,954,080 208,017,761 6,912,096 21,251,667 83,772,556 191,065,583 3,695,836,342 143,946 312,178,277 235,199,481 7,203,222 22,002,809 47,772,765 205,250,547 3,948,859,654 1-12 2013 1-12 2014 139,548 304,119,788 259,904,114 7,272,492 22,801,980 14,141,202 218,161,984 4,181,162,839 1-12 2015 135.090 295,900,125 278.573.382 7.045.264 23,634,463 (13,352,984) 230,190,733 4.398.000.588 (44 042 996) 4 595 243 919 1-12 2016 130 568 287.385.386 300 160 353 6.769.612 24.498.417 241 286 327 25,225,597 4.770.526.410 2017 125.956 278.434.160 322.728.581 6.442.333 (75.962.352) 251.244.842 1-12 260,034,649 1-12 2018 121,253 269,061,545 343,486,529 5,998,047 25,892,569 (106,315,601) 4,924,245,458 5,055,751,171 1-12 2019 116.498 259,307,110 363,508,111 5.452.375 26,511,225 (136,164,601) 267,670,314 111,716 249,151,977 383,036,470 4,922,809 27,104,997 (165,912,298) 274,048,623 5,163,887,496 1-12 2020 1-12 2021 106.917 238,657,243 399.907.398 4.440.988 27,695,249 (193.386.391) 279,222,173 5,249,723,279 1-12 2022 102,085 227,888,029 419,263,752 3,996,272 28,228,633 (223,600,628) 283,159,479 5,309,282,129 1-12 2023 97.214 216.885.958 442.905.987 3.510.204 28.668.239 (258.198.472) 285.488.651 5.336.572.308 29.009.865 92.335 466.677.335 3.015.934 (292.958.711) 286.025.299 5.329.638.895 1-12 2024 205.744.423 87,481 492,143,459 2,597,628 (329,505,429) 284,647,487 5,284,780,954 1-12 194,510,887 29,275,229 2025 1-12 2026 82,666 183,236,443 520,629,811 2,264,253 29,482,423 (369,140,043) 281,096,557 5,196,737,468 171,982,101 549,199,764 1,984,786 29,589,150 (408,791,600) 275,148,827 5,063,094,695 1-12 2027 77,881 2028 160,802,530 574,303,821 1,702,982 29,548,590 (444,752,864) 266,781,346 4,885,123,177 1-12 73,121 1-12 2029 68,409 149,727,087 595,480,026 1,428,263 29,351,433 (476,532,635) 256,093,457 4,664,683,999 1-12 2030 63.776 138,788,287 616.429.815 1.191.599 29.016.593 (507.849.719) 243.104.405 4.399.938.685 640.058.023 4.085.940.043 1-12 2031 59.237 128.027.770 1.000.523 28.592.160 (541.622.936) 227.624.294 54,774 117,473,434 859,722 28,185,386 (575,582,093) 209,391,001 3,719,748,951 1-12 2032 664.010.419 1-12 2033 50,397 107,182,613 681,364,876 725,082 27,623,513 (602,530,858) 188,466,552 3,305,684,645 1-12 2034 46,125 97,203,711 692,672,355 590,124 26,873,349 (622,932,117) 165.093.848 2,847,846,376 702,381,262 462,590 (641,240,412) 2,346,002,487 1-12 2035 41,990 87,558,634 25,955,193 139,396,523 1-12 2036 38,027 78,338,677 712,813,506 359,489 24,910,139 (659,744,458) 111,274,511 1,797,532,541 1-12 2037 34.245 69,611,210 720.364.409 286.995 23,762,558 (674.802.752) 80,656,444 1,203,386,232 718,121,744 (679,428,673) 1-12 2038 30.650 61,431,170 229.352 22,508,747 47.780.958 571.738.518 (88,995,491) 1-12 2039 27,258 53,816,329 706.374.763 178,200 21.137.397 (673,874,031) 13,140,022 24,095 (776,136,312) 2040 46.789.724 691,156,651 133.049 19.684.004 (664.183.980) (22.956.841) 1-12 1-12 2041 21,178 40,385,606 675,865,613 96,854 18,210,772 (653,787,631) (60,480,876) (1,490,404,819) 656,475,829 1-12 2042 18.508 34.614.563 71.332 16.761.093 (638.693.691 (99.396.936) (2,228,495,446) 1-12 2043 16,074 29,463,668 628,052,672 54,888 15,331,775 (613,975,667) (139,375,306) (2,981,846,419) (3,743,467.258) 1-12 2044 13.872 24.903.721 592,611,984 42.070 13.908.346 (581,658,679) (179.962.160) 556,053.002 20 899 552 (547,697,364) (515,280,722) (4.512,095,221) 1-12 2045 11 900 32 432 12 511 482 (220, 930, 600) 24,378 (5,289,695,534) 17,419,464 521.497.915 11.177.893 (262.319.591) 1-12 2046 10.151 487,464,418 (482,996,477) (6,076,910,087) 1-12 2047 8.611 14.419.251 17.832 9.933.478 (304.218.076) 1-12 11,857,015 450,185,690 12,960 8,789,289 (447,130,924) (346,562,774) (6,870,603,785) 2048 7,263 1-12 2049 6,088 9,685,517 410,681,954 9,162 7,730,149 (408,735,748) (389,178,805) (7,668,518,338) 1-12 2050 7,853,368 372,153,584 6,125 6,748,756 (371,055,097) (432,032,143) (8,471,605,579) 5,068 1-12 2051 4,191 6,318,989 336,778,617 3,928 5,842,327 (336,305,884) (475,241,746) (9,283,153,209) 1-12 2052 3,444 5,043,196 305,420,414 2,618 5,017,976 (305, 397, 811)(519,020,596) (10,107,571,616) 1-12 2053 2 812 3 991 470 274 781 013 1.633 4 286 172 (275.077.347) (563 543 419) (10 946 192 382) (608,827,222) (11,799,167,596) 2054 2.280 3.132.738 243.643.617 929 3.636.185 (244.147.993) 1-12 1-12 2055 1,835 2,436,653 213,758,869 431 3,062,226 (214,384,872) (654,922,118) (12,668,474,587) (701,977,850) 1-12 2056 1.466 1.876.736 186,362,438 100 2.560.082 (187.045.884) (13,557,498,321) 1-12 2057 1,163 1,430,893 161,818,136 2,123,818 (162,511,062) (750,193,687) (14,470,203,070) 1-12 2058 916 1.079.904 139.636.005 1.748.683 (140.304.784) (799.778.945) (15.410.286.799) 1-12 2059 716 806,841 118,830,110 1,429,159 (119,452,428) (850,910,718) (16,380,649,945) 1-12 2060 557 601,737 99.905.625 1,158,752 (100,462,641) (903,752,985) (17,384,865,571) 2061 430 449.109 83.498.846 932.875 (83.982.611) (958.524.467) (18.427.372.649) 1-12 1-12 332,705 69,483,967 746,756 (69,898,018) (1,015,468,526) (19,512,739,193) 2062 330 1-12 2063 252 244,662 57,568,607 594,284 (57,918,229) (1,074,828,438) (20,645,485,861) 1-12 2064 191 178,519 47,532,523 470,090 (47,824,094) (1,136,846,481) (21,830,156,436) 2065 144 129,184 39,133,595 369,834 (39,374,244) (1,201,766,324) (23,071,297,005) 1-12 1-12 2066 108 92,775 32,087,777 289,290 (32,284,292) (1,269,830,287) (24,373,411,583) 1-12 2067 80 66,046 26.259.341 224,760 (26.418.055) (1.341.281.583) (25.741.111.221) 59 46.481 (21,442,693) (27.178.920.116) 21.315.410 (1.416.366.201) 1-12 2068 173,765 1-12 2069 43 32,222 17,101,112 133,239 (17,202,129) (1,495,326,926) (28,691,449,171) 1-12 2070 31 21,935 13,593,083 101,006 (13,672,154) (1,578,416,755) (30,283,538,080)

5.680.231

27

2071

7,985

1-6

(821,729,459)

(31.110.980.708)

(5,713,168)

40.922

## Attachment A(12) 19 Years of Morbidity and Mortality Improvement

California Public Employees Retirement System Summary of Projected Values All Plans

| LTC Program Funded Ratio: Surplus/(Deficit) \$ = PV (Fund Balance + Earnings): Surplus/(Deficit) \$ as a Percentage of PV(Premiums): |              | 126.72%<br>690,956,633 | = Standard Program Defin                             |  |                        |                                  | Starting Rate:<br>Investment Rate:<br>Discount Rate: | Annual<br>6.25%<br>Scenario 1<br>Scenario 1 |                                  |
|--|--------------|------------------------|--|--|------------------------|----------------------------------|--|---|----------------------------------|
| Surplus/(Deficit) \$ as a Pe<br>Fund Balance @ End of Pr<br>Totals - 7/2011 thru 6/207<br>As a % of Premiums:                        | ojection:    | remiums):              | 22.82%<br>48,791,856,196<br>5,542,511,960<br>100.00% | = Standard Program Defin<br>100.00%<br>19,600,269,221<br>353.64% | 90,896,489<br>1.64%    | 100.00%<br>752,054,021<br>13.57% | (14,900,707,771)<br>-268.84%                         | 60,415,779,145<br>1090.04%                  |                                  |
| Totals - Present Values:   |              |                        | 3,028,342,769  | 5,265,435,419  | 58,838,801             | 289,896,737                      | (2,585,828,188)                                      | 6,990,993,175                               |                                  |
| As a % of PV(Premiums):  |              |                        | 100.00%  | 173.87%  | 1.94%                  | 9.57%                            | -85.39%  | 230.85%                                     |                                  |
| <u>Months</u>  | <u>Year</u>  | <u>Lives</u>           | Total Premiums                                       | LTC Paid Claims  | RoP Claims             | Total Expenses                   | <u>Earnings</u>                                      | Investment Earnings                         | Fund Balance<br>3,276,784,822    |
| 7-12   | 2011         | 152,290                | 163,214,995  | 86,518,260   | 3,387,165              | 8,981,681                        | 64,327,889   | 102,145,483                                 | 3,443,258,194                    |
| 1-12<br>1-12   | 2012<br>2013 | 147,709<br>143,043     | 319,059,141<br>310,506,451                           | 189,064,343<br>213,621,901                                       | 6,895,002<br>7,167,348 | 18,148,098<br>18,746,908         | 104,951,698<br>70,970,294                            | 219,154,237<br>238,408,258                  | 3,767,364,129<br>4,076,742,681   |
| 1-12   | 2013         | 138,324                | 301,716,982  | 235,804,779  | 7,107,348              | 19,383,443                       | 39,310,519   | 256,670,452                                 | 4,372,723,653                    |
| 1-12   | 2015         | 133,569                | 292,812,777  | 252,377,141  | 6,975,166              | 20,045,063                       | 13,415,407   | 274,366,302                                 | 4,660,505,363                    |
| 1-12   | 2016         | 128,772                | 283,662,504  | 271,464,517  | 6,685,429              | 20,730,126                       | (15,217,569)   | 291,470,022                                 | 4,936,757,816                    |
| 1-12   | 2017         | 123,912                | 274,128,945  | 291,313,450  | 6,346,259              | 21,274,336                       | (44,805,099)   | 307,796,860                                 | 5,199,749,577                    |
| 1-12   | 2018         | 118,985                | 264,230,361  | 309,404,757  | 5,893,779              | 21,763,059                       | (72,831,233)   | 323,339,651                                 | 5,450,257,995                    |
| 1-12   | 2019         | 114,031                | 254,007,602  | 326,727,442  | 5,344,120              | 22,208,604                       | (100,272,564)  | 338,139,143                                 | 5,688,124,575                    |
| 1-12   | 2020         | 109,076                | 243,443,552  | 343,459,398  | 4,812,904              | 22,630,437                       | (127,459,187)  | 352,116,421                                 | 5,912,781,808                    |
| 1-12   | 2021         | 104,128                | 232,599,901  | 357,608,875  | 4,330,873              | 23,046,183                       | (152,386,030)  | 404,448,471                                 | 6,164,844,249                    |
| 1-12   | 2022         | 99,172                 | 221,541,618  | 373,880,074  | 3,887,360              | 23,412,613                       | (179,638,430)  | 462,466,712                                 | 6,447,672,531                    |
| 1-12<br>1-12   | 2023<br>2024 | 94,202<br>89,249       | 210,311,139<br>199,001,068                           | 393,964,804<br>414,108,559                                       | 3,405,930<br>2,918,933 | 23,700,092<br>23,905,755         | (210,759,687)<br>(241,932,180)                       | 482,785,786<br>502,265,290                  | 6,719,698,630<br>6,980,031,740   |
| 1-12   | 2024         | 84,345                 | 187,658,130  | 435,644,456  | 2,507,685              | 24,047,771                       | (274,541,782)  | 520,822,194                                 | 7,226,312,152                    |
| 1-12   | 2026         | 79,502                 | 176,331,779  | 459,722,190  | 2,180,288              | 24,141,270                       | (309,711,968)  | 538,211,128                                 | 7,454,811,312                    |
| 1-12   | 2027         | 74,710                 | 165,080,604  | 483,751,478  | 1,906,328              | 24,152,780                       | (344,729,982)  | 554,228,751                                 | 7,664,310,081                    |
| 1-12   | 2028         | 69,968                 | 153,956,756  | 504,626,657  | 1,631,506              | 24,045,434                       | (376,346,841)  | 568,915,249                                 | 7,856,878,488                    |
| 1-12   | 2029         | 65,294                 | 142,987,659  | 521,966,548  | 1,364,822              | 23,812,655                       | (404, 156, 366)                                      | 582,462,629                                 | 8,035,184,752                    |
| 1-12   | 2030         | 60,718                 | 132,203,165  | 539,011,801  | 1,135,750              | 23,496,538                       | (431,440,924)  | 594,973,152                                 | 8,198,716,979                    |
| 1-12   | 2031         | 56,236                 | 121,608,663  | 558,739,048  | 951,176                | 23,209,694                       | (461,291,255)  | 606,285,398                                 | 8,343,711,122                    |
| 1-12   | 2032         | 51,851                 | 111,234,475  | 579,309,527  | 815,223                | 22,820,953                       | (491,711,228)  | 616,113,423                                 | 8,468,113,317                    |
| 1-12   | 2033         | 47,571                 | 101,175,356  | 593,853,902  | 685,794                | 22,292,130                       | (515,656,470)  | 624,605,056                                 | 8,577,061,903                    |
| 1-12   | 2034         | 43,414                 | 91,472,926   | 602,890,340  | 556,720                | 21,616,091                       | (533,590,226)  | 632,155,915                                 | 8,675,627,593                    |
| 1-12<br>1-12   | 2035<br>2036 | 39,409<br>35,587       | 82,143,363<br>73,268,457                             | 610,314,958  | 435,286<br>337,397     | 20,810,291<br>19,908,579         | (549,417,171)<br>(565,142,288)                       | 639,028,149<br>645,225,125                  | 8,765,238,570<br>8,845,321,407   |
| 1-12   | 2036         | 31,957                 | 64,906,895   | 618,164,769<br>623,359,991                                       | 268,664                | 18,931,236                       | (577,652,997)  | 650,788,592                                 | 8,918,457,003                    |
| 1-12   | 2037         | 28,521                 | 57,105,266   | 620,005,141  | 214,154                | 17,876,092                       | (580,990,120)  | 656,133,930                                 | 8,993,600,813                    |
| 1-12   | 2039         | 25,292                 | 49,874,705   | 608,423,080  | 165,968                | 16,734,995                       | (575,449,339)  | 661,989,168                                 | 9,080,140,642                    |
| 1-12   | 2040         | 22,293                 | 43,230,968   | 593,832,405  | 123,600                | 15,536,534                       | (566,261,570)  | 668,884,517                                 | 9,182,763,589                    |
| 1-12   | 2041         | 19,539                 | 37,200,559   | 579,151,001  | 89,744                 | 14,329,917                       | (556,370,104)  | 677,035,911                                 | 9,303,429,396                    |
| 1-12   | 2042         | 17,027                 | 31,787,878   | 560,993,811  | 65,926                 | 13,149,135                       | (542,420,994)  | 686,678,542                                 | 9,447,686,944                    |
| 1-12   | 2043         | 14,746                 | 26,975,688   | 535,244,109  | 50,599                 | 11,991,565                       | (520,310,585)  | 698,404,308                                 | 9,625,780,667                    |
| 1-12   | 2044         | 12,690                 | 22,731,779   | 503,673,642  | 38,684                 | 10,845,783                       | (491,826,330)  | 712,969,196                                 | 9,846,923,533                    |
| 1-12   | 2045         | 10,856                 | 19,018,991   | 471,306,667  | 29,746                 | 9,727,639                        | (462,045,061)  | 730,888,018                                 | 10,115,766,490                   |
| 1-12   | 2046         | 9,234                  | 15,803,950   | 440,787,905  | 22,303                 | 8,665,215                        | (433,671,473)  | 752,387,478                                 | 10,434,482,495                   |
| 1-12   | 2047         | 7,811                  | 13,042,241   | 410,872,506  | 16,273                 | 7,677,957                        | (405,524,494)  | 777,654,541                                 | 10,806,612,543                   |
| 1-12<br>1-12   | 2048<br>2049 | 6,570<br>5,491         | 10,692,028<br>8,707,149                              | 378,412,379<br>344,273,480                                       | 11,797<br>8,319        | 6,773,651<br>5,939,979           | (374,505,799)<br>(341,514,629)                       | 807,071,709<br>841,174,824                  | 11,239,178,453<br>11,738,838,648 |
| 1-12   | 2050         | 4,558                  | 7,038,257  | 311,132,289  | 5,547                  | 5,170,729                        | (309,270,308)  | 880,365,677                                 | 12,309,934,017                   |
| 1-12   | 2051         | 3,759                  | 5,645,462  | 280,791,288  | 3,549                  | 4,463,260                        | (279,612,635)  | 924,897,844                                 | 12,955,219,226                   |
| 1-12   | 2052         | 3,081                  | 4,491,394  | 253,941,133  | 2,359                  | 3,822,430                        | (253,274,527)  | 974,944,605                                 | 13,676,889,303                   |
| 1-12   | 2053         | 2,508                  | 3,543,298  | 227,838,100  | 1,467                  | 3,255,546                        | (227,551,816)  | 1,030,750,618                               | 14,480,088,106                   |
| 1-12   | 2054         | 2,028                  | 2,771,866  | 201,473,278  | 833                    | 2,753,886                        | (201,456,130)  | 1,092,770,924                               | 15,371,402,899                   |
| 1-12   | 2055         | 1,628                  | 2,148,739  | 176,283,482  | 385                    | 2,312,515                        | (176,447,644)  | 1,161,458,823                               | 16,356,414,079                   |
| 1-12   | 2056         | 1,297                  | 1,649,305  | 153,274,054  | 89                     | 1,927,745                        | (153,552,583)  | 1,237,192,233                               | 17,440,053,729                   |
| 1-12   | 2057         | 1,026                  | 1,253,070  | 132,726,117  | -                      | 1,594,653                        | (133,067,701)  | 1,320,331,695                               | 18,627,317,723                   |
| 1-12   | 2058         | 805                    | 942,286  | 114,220,331  | -                      | 1,309,249                        | (114,587,294)  | 1,411,267,332                               | 19,923,997,760                   |
| 1-12   | 2059         | 628                    | 701,405  | 96,940,506   | -                      | 1,067,001                        | (97,306,102)   | 1,510,469,295                               | 21,337,160,954                   |
| 1-12   | 2060         | 487<br>375             | 521,117  | 81,285,384   | -                      | 862,695<br>692,596               | (81,626,962)   | 1,618,470,114                               | 22,874,004,105                   |
| 1-12<br>1-12   | 2061<br>2062 | 287                    | 387,453<br>285,925                                   | 67,756,702<br>56,236,907   | -                      | 552,881                          | (68,061,845)<br>(56,503,863)                         | 1,735,792,376<br>1,862,985,247              | 24,541,734,636<br>26,348,216,020 |
| 1-12   | 2062         | 287                    | 209,445  | 46,473,443   | -                      | 438,784                          | (46,702,781)   | 2,000,655,785                               | 28,302,169,024                   |
| 1-12   | 2064         | 165                    | 152,218  | 38,273,208   | -                      | 346,134                          | (38,467,125)   | 2,149,474,400                               | 30,413,176,299                   |
| 1-12   | 2065         | 124                    | 109,700  | 31,429,326   | _                      | 271,567                          | (31,591,193)   | 2,310,176,740                               | 32,691,761,846                   |
| 1-12   | 2066         | 93                     | 78,446   | 25,704,498   | -                      | 211,841                          | (25,837,892)   | 2,483,571,505                               | 35,149,495,458                   |
| 1-12   | 2067         | 69                     | 55,595   | 20,981,478   | -                      | 164,135                          | (21,090,018)   | 2,670,543,281                               | 37,798,948,722                   |
| 1-12   | 2068         | 51                     | 38,937   | 16,988,114   | -                      | 126,544                          | (17,075,722)   | 2,872,056,131                               | 40,653,929,131                   |
| 1-12   | 2069         | 37                     | 26,844   | 13,595,116   | -                      | 96,761                           | (13,665,033)   | 3,089,166,275                               | 43,729,430,374                   |
| 1-12   | 2070         | 27                     | 18,159   | 10,778,898   | -                      | 73,149                           | (10,833,887)   | 3,323,014,081                               | 47,041,610,568                   |
| 1-6  | 2071         | 23                     | 6,572  | 4,495,476  | -                      | 29,638                           | (4,518,542)  | 1,754,764,170                               | 48,791,856,196                   |

9/12/2011

Annual

#### Attachment(13) No Morbidity or Mortality Improvement

## California Public Employees Retirement System Summary of Projected Values All Plans

|   |                  |                    |  | All Pla  | ns                     |                                  |                                |  |                                    |
|---|------------------|--------------------|--|--|------------------------|----------------------------------|--------------------------------|--|------------------------------------|
| LTC Program Funded Ratic<br>Surplus/(Deficit) \$ = PV (I<br>Surplus/(Deficit) \$ as a Per | Fund Balance + E |                    |  | = Standard Program Defin<br>= Standard Program Defin |                        |                                  |                                | Starting Rate:<br>Investment Rate:<br>Discount Rate: | Annual 6.25% Scenario 1 Scenario 1 |
| Fund Balance @ End of Pro<br>Totals - 7/2011 thru 6/207<br>As a % of Premiums:            | ojection:        | omanis).           | 15,848,255,905<br>5,373,063,963<br>100.00% | 100.00%<br>21,440,608,375<br>399.04%                 | 90,896,489<br>1.69%    | 100.00%<br>797,484,553<br>14.84% | (16,955,925,454)<br>-315.57%   | 29,527,396,538<br>549.54%                            |                                    |
| Totals - Present Values:<br>As a % of PV(Premiums):                                       |                  |                    | 2,982,496,441<br>100.00%                   | 5,664,691,469<br>189.93%                             | 58,838,801<br>1.97%    | 304,594,421<br>10.21%            | (3,045,628,251)<br>-102.12%    | 5,627,351,976<br>188.68%                             |                                    |
| <u>Months</u>   | <u>Year</u>      | Lives              | <u>Total Premiums</u>                      | LTC Paid Claims                                      | RoP Claims             | Total Expenses                   | <u>Earnings</u>                | Investment Earnings                                  | Fund Balance<br>3,276,784,822      |
| 7-12  | 2011             | 152,290            | 163,214,842                                | 86,520,639   | 3,387,165              | 8,996,208                        | 64,310,829                     | 102,145,311  | 3,443,240,962                      |
| 1-12  | 2012             | 147,683            | 319,013,080                                | 189,224,744  | 6,895,002              | 18,252,161                       | 104,641,173                    | 219,146,294  | 3,767,028,429                      |
| 1-12  | 2013             | 142,966            | 310,323,763                                | 214,369,032  | 7,167,348              | 18,957,871                       | 69,829,512                     | 238,357,579  | 4,075,215,519                      |
| 1-12  | 2014             | 138,172            | 301,315,395                                | 237,602,595  | 7,218,240              | 19,708,940                       | 36,785,620                     | 256,504,781  | 4,368,505,921                      |
| 1-12  | 2015             | 133,320            | 292,116,794                                | 255,678,231  | 6,975,166              | 20,493,431                       | 8,969,966                      | 273,975,616  | 4,651,451,503                      |
| 1-12  | 2016             | 128,407            | 282,605,375                                | 276,755,970  | 6,685,429              | 21,310,050                       | (22,146,074)                   | 290,702,619  | 4,920,008,047                      |
| 1-12  | 2017             | 123,411            | 272,653,550                                | 299,040,711  | 6,346,259              | 21,989,013                       | (54,722,433)                   | 306,457,877  | 5,171,743,492                      |
| 1-12<br>1-12  | 2018<br>2019     | 118,334<br>113,215 | 262,289,409<br>251,566,044                 | 319,930,824<br>340,354,594                           | 5,893,779<br>5,344,120 | 22,616,026<br>23,202,844         | (86,151,220)<br>(117,335,514)  | 321,193,149<br>334,911,209                           | 5,406,785,421<br>5,624,361,116     |
| 1-12  | 2020             | 108,085            | 240,471,882                                | 360,619,884  | 4,812,904              | 23,769,696                       | (148,730,602)                  | 347,492,098  | 5,823,122,611                      |
| 1-12  | 2021             | 102,956            | 229,079,735                                | 378,797,943  | 4,330,873              | 24,335,668                       | (178,384,749)                  | 397,331,995  | 6,042,069,858                      |
| 1-12  | 2022             | 97,814             | 217,467,127                                | 399,482,205  | 3,887,360              | 24,853,374                       | (210,755,813)                  | 451,993,835  | 6,283,307,880                      |
| 1-12  | 2023             | 92,657             | 205,687,050                                | 424,171,233  | 3,405,930              | 25,288,279                       | (247,178,393)                  | 468,952,599  | 6,505,082,086                      |
| 1-12  | 2024             | 87,519             | 193,843,517                                | 449,017,522  | 2,918,933              | 25,635,737                       | (283,728,676)                  | 484,410,567  | 6,705,763,978                      |
| 1-12  | 2025             | 82,436             | 181,986,812                                | 475,616,427  | 2,507,685              | 25,914,777                       | (322,052,077)                  | 498,221,336  | 6,881,933,237                      |
| 1-12  | 2026             | 77,422             | 170,175,658                                | 505,265,157  | 2,180,288              | 26,141,851                       | (363,411,639)                  | 510,051,249  | 7,028,572,847                      |
| 1-12  | 2027             | 72,473             | 158,481,099                                | 535,116,493  | 1,906,328              | 26,278,148                       | (404,819,870)                  | 519,606,903  | 7,143,359,880                      |
| 1-12  | 2028             | 67,586             | 146,965,622                                | 561,691,202  | 1,631,506              | 26,278,731                       | (442,635,817)                  | 526,859,657  | 7,227,583,720                      |
| 1-12  | 2029             | 62,783             | 135,663,546                                | 584,477,298  | 1,364,822              | 26,133,858                       | (476,312,431)                  | 531,949,868  | 7,283,221,157                      |
| 1-12  | 2030             | 58,099             | 124,606,470                                | 607,066,468  | 1,135,750              | 25,860,736                       | (509,456,483)                  | 534,917,297  | 7,308,681,971                      |
| 1-12  | 2031             | 53,549             | 113,836,657                                | 632,244,236  | 951,176                | 25,473,853                       | (544,832,608)                  | 535,522,906  | 7,299,372,269                      |
| 1-12  | 2032<br>2033     | 49,135             | 103,417,590                                | 657,100,926  | 815,223                | 24,957,969<br>24,290,916         | (579,456,527)                  | 533,456,060  | 7,253,371,801                      |
| 1-12<br>1-12  | 2034             | 44,862<br>40,744   | 93,436,912<br>83,918,398                   | 674,242,374<br>684,261,070                           | 685,794<br>556,720     | 23,465,951                       | (605,782,172)<br>(624,365,342) | 528,895,741<br>522,289,276                           | 7,176,485,371<br>7,074,409,305     |
| 1-12  | 2035             | 36,809             | 74,859,682                                 | 691,693,041  | 435,286                | 22,505,476                       | (639,774,121)                  | 513,923,907  | 6,948,559,091                      |
| 1-12  | 2036             | 33,084             | 66,327,981                                 | 698,943,675  | 337,397                | 21,449,919                       | (654,403,010)                  | 503,783,585  | 6,797,939,665                      |
| 1-12  | 2037             | 29,573             | 58,369,846                                 | 702,709,216  | 268,664                | 20,323,234                       | (664,931,267)                  | 491,882,381  | 6,624,890,779                      |
| 1-12  | 2038             | 26,275             | 51,020,054                                 | 696,619,469  | 214,154                | 19,122,008                       | (664,935,577)                  | 478,634,686  | 6,438,589,888                      |
| 1-12  | 2039             | 23,196             | 44,272,999                                 | 681,222,464  | 165,968                | 17,836,692                       | (654,952,125)                  | 464,782,489  | 6,248,420,252                      |
| 1-12  | 2040             | 20,357             | 38,126,874                                 | 662,431,772  | 123,600                | 16,499,301                       | (640,927,798)                  | 450,829,740  | 6,058,322,194                      |
| 1-12  | 2041             | 17,768             | 32,597,576                                 | 643,578,921  | 89,744                 | 15,165,490                       | (626,236,580)                  | 436,916,183  | 5,869,001,798                      |
| 1-12  | 2042             | 15,423             | 27,679,101                                 | 621,043,792  | 65,926                 | 13,872,303                       | (607,302,920)                  | 423,185,965  | 5,684,884,842                      |
| 1-12  | 2043             | 13,306             | 23,345,878                                 | 590,409,609  | 50,599                 | 12,614,254                       | (579,728,585)                  | 410,158,308  | 5,515,314,566                      |
| 1-12  | 2044             | 11,408             | 19,554,733                                 | 553,712,071  | 38,684                 | 11,375,177                       | (545,571,200)                  | 398,514,558  | 5,368,257,924                      |
| 1-12<br>1-12  | 2045<br>2046     | 9,722<br>8,240     | 16,261,760<br>13,431,100                   | 516,466,208<br>481,537,489                           | 29,746<br>22,303       | 10,171,282<br>9,033,336          | (510,405,475)                  | 388,656,051<br>380,657,408                           | 5,246,508,499<br>5,150,003,879     |
| 1-12  | 2047             | 6,947              | 11,016,996                                 | 447,544,634  | 16,273                 | 7,982,230                        | (477,162,028)<br>(444,526,141) | 374,538,729  | 5,080,016,468                      |
| 1-12  | 2048             | 5,823              | 8,976,708                                  | 411,035,519  | 11,797                 | 7,024,536                        | (409,095,144)                  | 370,521,244  | 5,041,442,567                      |
| 1-12  | 2049             | 4,851              | 7,264,470                                  | 372,950,784  | 8,319                  | 6,144,559                        | (371,839,192)                  | 368,979,890  | 5,038,583,266                      |
| 1-12  | 2050             | 4,013              | 5,832,973                                  | 336,181,383  | 5,547                  | 5,334,424                        | (335,688,381)                  | 370,129,012  | 5,073,023,897                      |
| 1-12  | 2051             | 3,298              | 4,645,632                                  | 302,644,489  | 3,549                  | 4,591,288                        | (302,593,694)                  | 374,007,927  | 5,144,438,130                      |
| 1-12  | 2052             | 2,693              | 3,667,610                                  | 273,047,609  | 2,359                  | 3,920,408                        | (273,302,766)                  | 380,554,457  | 5,251,689,821                      |
| 1-12  | 2053             | 2,186              | 2,869,260                                  | 244,367,988  | 1,467                  | 3,329,398                        | (244,829,593)                  | 389,768,752  | 5,396,628,980                      |
| 1-12  | 2054             | 1,761              | 2,224,294                                  | 215,513,378  | 833                    | 2,808,250                        | (216,098,166)                  | 401,861,432  | 5,582,392,245                      |
| 1-12  | 2055             | 1,409              | 1,707,137                                  | 188,051,402  | 385                    | 2,351,277                        | (188,695,928)                  | 417,019,302  | 5,810,715,619                      |
| 1-12  | 2056             | 1,119              | 1,296,084                                  | 163,059,490  | 89                     | 1,954,339                        | (163,717,833)                  | 435,324,788  | 6,082,322,574                      |
| 1-12<br>1-12  | 2057<br>2058     | 882<br>691         | 973,018<br>722,275                         | 140,823,454<br>120,870,550                           | -                      | 1,612,102<br>1,320,246           | (141,462,538)<br>(121,468,521) | 456,818,246<br>481,547,191                           | 6,397,678,282                      |
| 1-12  | 2059             | 537                | 530,124                                    | 102,304,158  | -                      | 1,073,602                        | (102,847,635)                  | 509,618,787  | 6,757,756,951<br>7,164,528,102     |
| 1-12  | 2060             | 415                | 388,031                                    | 85,550,540   |                        | 866,175                          | (86,028,684)                   | 541,178,081  | 7,619,677,499                      |
| 1-12  | 2061             | 319                | 284,191                                    | 71,136,739   | _                      | 693,959                          | (71,546,507)                   | 576,327,429  | 8,124,458,422                      |
| 1-12  | 2062             | 244                | 206,586                                    | 58,917,815   | -                      | 553,018                          | (59,264,248)                   | 615,164,461  | 8,680,358,635                      |
| 1-12  | 2063             | 185                | 149,021                                    | 48,604,601   | -                      | 438,266                          | (48,893,847)                   | 657,813,099  | 9,289,277,888                      |
| 1-12  | 2064             | 140                | 106,510                                    | 39,973,348   | -                      | 345,251                          | (40,212,088)                   | 704,426,605  | 9,953,492,405                      |
| 1-12  | 2065             | 105                | 75,302                                     | 32,789,026   | -                      | 270,515                          | (32,984,239)                   | 755,186,434  | 10,675,694,600                     |
| 1-12  | 2066             | 78                 | 52,671                                     | 26,788,038   | -                      | 210,732                          | (26,946,099)                   | 810,307,135  | 11,459,055,636                     |
| 1-12  | 2067             | 58                 | 36,365                                     | 21,843,909   | -                      | 163,012                          | (21,970,555)                   | 870,035,485  | 12,307,120,565                     |
| 1-12  | 2068             | 42                 | 24,648                                     | 17,664,406   | -                      | 125,456                          | (17,765,213)                   | 934,650,174  | 13,224,005,526                     |
| 1-12  | 2069             | 31                 | 16,264                                     | 14,112,944   | -                      | 95,709                           | (14,192,389)                   | 1,004,471,338  | 14,214,284,474                     |
| 1-12  | 2070             | 22                 | 10,367                                     | 11,167,184   | -                      | 72,138                           | (11,228,955)                   | 1,079,847,405  | 15,282,902,924                     |
| 1-6   | 2071             | 19                 | 3,512                                      | 4,649,483  | -                      | 29,104                           | (4,675,075)                    | 570,028,056  | 15,848,255,905                     |
|   |                  |                    |  |  |                        |                                  |                                |  |                                    |

9/12/2011

# **Attachment B**

## **Attachment B Summary**

- Attachment B(1) Margin 23.14% and Funded Ratio 127% "Base Case" Scenario, (i.e. Scenario #1)
- Attachment B(2) Margin79.13% and Funded Ratio 270% Investment Scenario #2
- Attachment B(3) Margin 47.72% and Funded Ratio 164% Investment Scenario #3
- Attachment B(4) Margin 76.98% and Funded Ratio 241% Investment Scenario #4
- Attachment B(5) Deficit (82.55%) and Funded Ratio 51% Investment Scenario #5
- Attachment B(6) Deficit (1.61%) and Funded Ratio 98% Investment Scenario #6
- Attachment B(7) Deficit (47.87%) and Funded Ratio 64% Investment Scenario #7

## Attachment B(1) Base Case - Premium Rate Increases

|                              |                      |                  |                          | All Plans                  | S                |                          |                                |                            |                                 |
|------------------------------|----------------------|------------------|--------------------------|----------------------------|------------------|--------------------------|--------------------------------|----------------------------|---------------------------------|
|                              |                      |                  |                          |                            |                  |                          | Starting Ra                    | te Before Adjustments:     | Annual                          |
|                              |                      |                  |                          |                            |                  |                          |                                | 6.25%                      |                                 |
| LTC Program Funded Rati      |                      |                  | 127.20%                  |                            |                  |                          |                                | Projection Years 11+:      | 7.60%                           |
| Surplus/(Deficit) \$ = PV    | (Fund Balance + Ea   | rnings):         | 700,742,636              | = Standard Program Defini  | ition            | _                        | Disco                          | ount Rate Adjustments:     | Scenario 1                      |
| Surplus/(Deficit) \$ as a Pe | ercentage of PV(Prei | miums):          | 23.14%                   | = Standard Program Defini  | ition            |                          |                                |                            |                                 |
| Fund Balance @ End of Pi     | rojection:           |                  | 49,493,046,394           | 100.00%                    |                  | 100.00%                  |                                |                            |                                 |
| Totals - 7/2011 thru 6/20    | 71:                  |                  | 5,545,681,269            | 19,529,919,673             | 90,896,489       | 750,438,987              | (14,825,573,880)               | 61,041,835,453             |                                 |
| As a % of Premiums:          |                      |                  | 100.00%                  | 352.16%                    | 1.64%            | 13.53%                   | -267.34%                       | 1100.71%                   |                                 |
|                              |                      |                  |                          |                            |                  |                          |                                |                            |                                 |
| Totals - Present Values:     |                      |                  | 3,028,780,651            | 5,256,373,930              | 58,838,801       | 289,610,105              | (2,576,042,185)                | 7,013,761,458              |                                 |
| As a % of PV(Premiums):      |                      |                  | 100.00%                  | 173.55%                    | 1.94%            | 9.56%                    | -85.05%                        | 231.57%                    |                                 |
|                              |                      |                  |                          |                            |                  |                          |                                |                            |                                 |
| <u>Months</u>                | <u>Year</u>          | <u>Lives</u>     | Total Premiums           | LTC Paid Claims            | RoP Claims       | Total Expenses           | <u>Earnings</u>                | Investment Earnings        | Fund Balance                    |
|                              |                      |                  |                          |                            |                  |                          |                                |                            | 3,276,784,822                   |
| 7-12                         | 2011                 | 152,290          | 163,214,995              | 86,518,260                 | 3,387,165        | 8,981,681                | 64,327,889                     | 102,145,483                | 3,443,258,194                   |
| 1-12                         | 2012                 | 147,709          | 319,059,141              | 189,064,343                | 6,895,002        | 18,148,098               | 104,951,698                    | 219,154,237                | 3,767,364,129                   |
| 1-12                         | 2013                 | 143,043          | 310,506,451              | 213,621,901                | 7,167,348        | 18,746,908               | 70,970,294                     | 238,408,258                | 4,076,742,681                   |
| 1-12                         | 2014                 | 138,324          | 301,716,982              | 235,804,779                | 7,218,240        | 19,383,443               | 39,310,519                     | 256,670,452                | 4,372,723,653                   |
| 1-12                         | 2015                 | 133,569          | 292,812,777              | 252,377,141                | 6,975,166        | 20,045,063               | 13,415,407                     | 274,366,302                | 4,660,505,363                   |
| 1-12                         | 2016                 | 128,772          | 283,662,504              | 271,464,517                | 6,685,429        | 20,730,126               | (15,217,569)                   | 291,470,022                | 4,936,757,816                   |
| 1-12                         | 2017                 | 123,912          | 274,128,945              | 291,313,450                | 6,346,259        | 21,274,336               | (44,805,099)                   | 307,796,860                | 5,199,749,577                   |
| 1-12                         | 2018                 | 118,985          | 264,230,361              | 309,404,757                | 5,893,779        | 21,763,059               | (72,831,233)                   | 323,339,651                | 5,450,257,995                   |
| 1-12                         | 2019                 | 114,031          | 254,007,602              | 326,727,442                | 5,344,120        | 22,208,604               | (100,272,564)                  | 338,139,143                | 5,688,124,575                   |
| 1-12                         | 2020                 | 109,076          | 243,443,552              | 343,459,398                | 4,812,904        | 22,630,437               | (127,459,187)                  | 352,116,421                | 5,912,781,808                   |
| 1-12                         | 2021                 | 104,128          | 232,599,901              | 357,608,875                | 4,330,873        | 23,046,183               | (152,386,030)                  | 404,448,471                | 6,164,844,249                   |
| 1-12                         | 2022                 | 99,172           | 221,541,618              | 373,880,074                | 3,887,360        | 23,412,613               | (179,638,430)                  | 462,466,712                | 6,447,672,531                   |
| 1-12                         | 2023                 | 94,202           | 210,311,139              | 393,964,804                | 3,405,930        | 23,700,092               | (210,759,687)                  | 482,785,786                | 6,719,698,630                   |
| 1-12                         | 2024                 | 89,249           | 199,001,068              | 414,108,559                | 2,918,933        | 23,905,755               | (241,932,180)                  | 502,265,290                | 6,980,031,740                   |
| 1-12                         | 2025                 | 84,345           | 187,658,130              | 435,644,456                | 2,507,685        | 24,047,771               | (274,541,782)                  | 520,822,194                | 7,226,312,152                   |
| 1-12                         | 2026                 | 79,502           | 176,331,779              | 459,722,190                | 2,180,288        | 24,141,270               | (309,711,968)                  | 538,211,128                | 7,454,811,312                   |
| 1-12                         | 2027                 | 74,710           | 165,080,604              | 483,751,478                | 1,906,328        | 24,152,780               | (344,729,982)                  | 554,228,751                | 7,664,310,081                   |
| 1-12                         | 2028                 | 69,968           | 153,956,756              | 504,626,657                | 1,631,506        | 24,045,434               | (376,346,841)                  | 568,915,249                | 7,856,878,488                   |
| 1-12                         | 2029                 | 65,294           | 142,987,659              | 521,966,548                | 1,364,822        | 23,812,655               | (404,156,366)                  | 582,462,629                | 8,035,184,752                   |
| 1-12                         | 2030                 | 60,718           | 132,203,311              | 539,004,799                | 1,135,750        | 23,470,506               | (431,407,744)                  | 594,973,543                | 8,198,750,550                   |
| 1-12                         | 2031                 | 56,254           | 121,641,574              | 558,280,229                | 951,176          | 23,058,064               | (460,647,895)                  | 606,305,326                | 8,344,407,981                   |
| 1-12                         | 2032                 | 51,885           | 111,327,765              | 577,770,778                | 815,223          | 22,660,699               | (489,918,935)                  | 616,227,053                | 8,470,716,099                   |
| 1-12                         | 2033                 | 47,618           | 101,314,984              | 591,395,682                | 685,794          | 22,142,029               | (512,908,521)                  | 624,901,005                | 8,582,708,583                   |
| 1-12                         | 2034                 | 43,471           | 91,646,420               | 599,727,318                | 556,720          | 21,476,888               | (530,114,506)                  | 632,711,914                | 8,685,305,991                   |
| 1-12                         | 2035                 | 39,474           | 82,340,290               | 606,614,417                | 435,286          | 20,682,434               | (545,391,847)                  | 639,912,205                | 8,779,826,349                   |
| 1-12                         | 2036                 | 35,657           | 73,479,687               | 614,058,683                | 337,397          | 19,792,076               | (560,708,468)                  | 646,498,471                | 8,865,616,351                   |
| 1-12                         | 2037                 | 32,030           | 65,124,492               | 618,983,471                | 268,664          | 18,825,823               | (572,953,466)                  | 652,506,608                | 8,945,169,493                   |
| 1-12                         | 2038                 | 28,595           | 57,322,422               | 615,518,913                | 214,154          | 17,781,528               | (576,192,173)                  | 658,344,433                | 9,027,321,753                   |
| 1-12                         | 2039                 | 25,365           | 50,086,087               | 603,959,865                | 165,968          | 16,651,118               | (570,690,864)                  | 664,731,524                | 9,121,362,413                   |
| 1-12                         | 2040                 | 22,364<br>19,607 | 43,432,755               | 589,474,789                | 123,600          | 15,462,962               | (561,628,596)                  | 672,192,687                | 9,231,926,503                   |
| 1-12                         | 2041                 | 17,007           | 37,389,850               | 574,966,945                | 89,744           | 14,265,872               | (551,932,712)                  | 680,940,666                | 9,360,934,457                   |
| 1-12<br>1-12                 | 2042<br>2043         | 14,806           | 31,962,611               | 557,053,936                | 65,926           | 13,093,630               | (538,250,881)                  | 691,207,641                | 9,513,891,218                   |
| 1-12                         | 2043                 | 12,745           | 27,134,548               | 531,609,781<br>500,375,134 | 50,599<br>38,684 | 11,943,747<br>10,805,046 | (516,469,579)                  | 703,582,502<br>718,819,416 | 9,701,004,140                   |
| 1-12                         | 2044                 | 10,905           | 22,874,351<br>19,145,498 | 468,334,699                | 29,746           | 9,693,356                | (488,344,513)<br>(458,912,303) | 737,434,194                | 9,931,479,044<br>10,210,000,935 |
| 1-12                         | 2045                 | 9,279            | 15,914,975               | 438,114,684                | 22,303           | 8,636,619                | (430,858,631)                  | 759,657,017                | 10,538,799,321                  |
| 1-12                         | 2047                 | 7,851            | 13,138,654               | 408,476,443                | 16,273           | 7,654,212                | (403,008,274)                  | 785,679,064                | 10,921,470,111                  |
| 1-12                         | 2047                 | 6,605            | 10,774,947               | 376,289,127                | 11,797           | 6,753,998                | (372,279,974)                  | 815,886,389                | 11,365,076,526                  |
| 1-12                         | 2049                 | 5,521            | 8,777,852                | 342,413,795                | 8,319            | 5,923,852                | (339,568,113)                  | 850,817,968                | 11,876,326,380                  |
| 1-12                         | 2050                 | 4,584            | 7,098,066                | 309,513,714                | 5,547            | 5,157,676                | (307,578,872)                  | 890,879,863                | 12,459,627,372                  |
| 1-12                         | 2051                 | 3,782            | 5,695,635                | 279,384,459                | 3,549            | 4,452,864                | (278,145,237)                  | 936,331,028                | 13,117,813,163                  |
| 1-12                         | 2052                 | 3,100            | 4,533,153                | 252,715,908                | 2,359            | 3,814,271                | (251,999,384)                  | 987,350,815                | 13,853,164,594                  |
| 1-12                         | 2053                 | 2,524            | 3,577,784                | 226,780,559                | 1,467            | 3,249,204                | (226,453,446)                  | 1,044,189,909              | 14,670,901,057                  |
| 1-12                         | 2054                 | 2,042            | 2,800,123                | 200,575,200                | 833              | 2,749,026                | (200,524,936)                  | 1,107,308,721              | 15,577,684,841                  |
| 1-12                         | 2055                 | 1,639            | 2,171,711                | 175,529,878                | 385              | 2,308,856                | (175,667,409)                  | 1,177,166,469              | 16,579,183,902                  |
| 1-12                         | 2056                 | 1,306            | 1,667,816                | 152,646,166                | 89               | 1,925,041                | (152,903,480)                  | 1,254,147,902              | 17,680,428,324                  |
| 1-12                         | 2057                 | 1,033            | 1,267,848                | 132,205,250                | -                | 1,592,690                | (132,530,092)                  | 1,338,621,016              | 18,886,519,248                  |
| 1-12                         | 2058                 | 811              | 953,971                  | 113,791,169                | _                | 1,307,841                | (114,145,038)                  | 1,430,983,826              | 20,203,358,035                  |
| 1-12                         | 2059                 | 633              | 710,557                  | 96,592,605                 | -                | 1,065,999                | (96,948,047)                   | 1,531,714,628              | 21,638,124,616                  |
| 1-12                         | 2060                 | 491              | 528,268                  | 81,007,025                 | -                | 861,999                  | (81,340,757)                   | 1,641,354,517              | 23,198,138,376                  |
| 1-12                         | 2061                 | 378              | 393,029                  | 67,534,843                 | -                | 692,124                  | (67,833,938)                   | 1,760,435,473              | 24,890,739,910                  |
| 1-12                         | 2062                 | 289              | 290,229                  | 56,060,128                 | -                | 552,562                  | (56,322,462)                   | 1,889,516,725              | 26,723,934,173                  |
| 1-12                         | 2063                 | 220              | 212,735                  | 46,332,471                 | -                | 438,570                  | (46,558,306)                   | 2,029,216,000              | 28,706,591,867                  |
| 1-12                         | 2064                 | 166              | 154,715                  | 38,160,569                 | _                | 345,995                  | (38,351,849)                   | 2,180,215,031              | 30,848,455,049                  |
| 1-12                         | 2065                 | 125              | 111,585                  | 31,339,195                 | _                | 271,479                  | (31,499,089)                   | 2,343,261,515              | 33,160,217,475                  |
| 1-12                         | 2066                 | 93               | 79,863                   | 25,632,598                 | -                | 211,790                  | (25,764,525)                   | 2,519,176,995              | 35,653,629,946                  |
| 1-12                         | 2067                 | 69               | 56,654                   | 20,924,166                 | -                | 164,111                  | (21,031,622)                   | 2,708,859,780              | 38,341,458,104                  |
| 1-12                         | 2068                 | 51               | 39,726                   | 16,942,992                 | -                | 126,538                  | (17,029,804)                   | 2,913,288,641              | 41,237,716,941                  |
| 1-12                         | 2069                 | 37               | 27,430                   | 13,560,292                 | -                | 96,768                   | (13,629,631)                   | 3,133,535,539              | 44,357,622,849                  |
| 1-12                         | 2070                 | 27               | 18,592                   | 10,752,486                 | -                | 73,166                   | (10,807,059)                   | 3,370,757,766              | 47,717,573,555                  |
| 1-6                          | 2071                 | 23               | 6,742                    | 4,484,883                  | -                | 29,652                   | (4,507,793)                    | 1,779,980,632              | 49,493,046,394                  |
|                              |                      |                  |                          |                            |                  |                          |                                |                            |                                 |

## Attachment B(2) Intvestment Rate Increasing ½% for 10 Years

|                              |             |         |                   | All Plans                                   |            |                |                               |                          |                   |
|------------------------------|-------------|---------|-------------------|---|------------|----------------|-------------------------------|--------------------------|-------------------|
|                              |             |         |                   |   |            | _              |                               | ite Before Adjustments:  | Annual            |
|                              |             |         |                   |   |            |                | ļ                             | Projection Years 1 - 10: | 6.25%             |
| LTC Program Funded Rati      |             |         | 269.61%           |   |            |                |                               | Projection Years 11+:    | 7.60%             |
| Surplus/(Deficit) \$ = PV    |             |         |                   | <ul> <li>Standard Program Defini</li> </ul> |            |                | Disc                          | ount Rate Adjustments:   | Scenario 2        |
| Surplus/(Deficit) \$ as a Pe |             | miums): | 79.13%            | <ul> <li>Standard Program Defini</li> </ul> | ition      |                |                               |                          |                   |
| Fund Balance @ End of P      |             |         | 1,752,443,698,188 | 100.00%                                     |            | 100.00%        |                               |                          |                   |
| Totals - 7/2011 thru 6/20    | )71:        |         | 5,545,681,269     | 19,529,919,673                              | 90,896,489 | 750,438,987    | (14,825,573,880)              | 1,763,992,487,247        |                   |
| As a % of Premiums:          |             |         | 100.00%           | 352.16%                                     | 1.64%      | 13.53%         | -267.34%                      | 31808.40%                |                   |
|                              |             |         |                   |   |            |                |                               |                          |                   |
| Totals - Present Values:     |             |         | 2,604,956,789     | 3,544,694,390                               | 53,163,628 | 222,485,380    | (1,215,386,610)               | 16,436,748,830           |                   |
| As a % of PV(Premiums):      |             |         | 100.00%           | 136.07%                                     | 2.04%      | 8.54%          | -46.66%                       | 630.98%                  |                   |
|                              |             |         |                   |   |            |                |                               |                          |                   |
| <u>Months</u>                | <u>Year</u> | Lives   | Total Premiums    | LTC Paid Claims                             | RoP Claims | Total Expenses | <u>Earnings</u>               | Investment Earnings      | Fund Balance      |
|                              |             |         |                   |   |            |                |                               |                          | 3,276,784,822     |
| 7-12                         | 2011        | 152,290 | 163,214,995       | 86,518,260                                  | 3,387,165  | 8,981,681      | 64,327,889                    | 102,145,483              | 3,443,258,194     |
| 1-12                         | 2012        | 147,709 | 319,059,141       | 189,064,343                                 | 6,895,002  | 18,148,098     | 104,951,698                   | 227,972,349              | 3,776,182,241     |
| 1-12                         | 2013        | 143,043 | 310,506,451       | 213,621,901                                 | 7,167,348  | 18,746,908     | 70,970,294                    | 267,663,351              | 4,114,815,887     |
| 1-12                         | 2014        | 138,324 | 301,716,982       | 235,804,779                                 | 7,218,240  | 19,383,443     | 39,310,519                    | 310,868,785              | 4,464,995,191     |
| 1-12                         | 2015        | 133,569 | 292,812,777       | 252,377,141                                 | 6,975,166  | 20,045,063     | 13,415,407                    | 358,564,203              | 4,836,974,801     |
| 1-12                         | 2016        | 128,772 | 283,662,504       | 271,464,517                                 | 6,685,429  | 20,730,126     | (15,217,569)                  | 411,378,237              | 5,233,135,470     |
| 1-12                         | 2017        | 123,912 | 274,128,945       | 291,313,450                                 | 6,346,259  | 21,274,336     | (44,805,099)                  | 469,868,041              | 5,658,198,411     |
| 1-12                         | 2018        | 118,985 | 264,230,361       | 309,404,757                                 | 5,893,779  | 21,763,059     | (72,831,233)                  | 534,986,332              | 6,120,353,510     |
| 1-12                         | 2019        | 114,031 | 254,007,602       | 326,727,442                                 | 5,344,120  | 22,208,604     | (100,272,564)                 | 607,983,626              | 6,628,064,572     |
| 1-12                         | 2020        | 109,076 | 243,443,552       | 343,459,398                                 | 4,812,904  | 22,630,437     | (127,459,187)                 | 690,197,887              | 7,190,803,272     |
| 1-12                         | 2021        | 104,128 | 232,599,901       | 357,608,875                                 | 4,330,873  | 23,046,183     | (152,386,030)                 | 831,162,709              | 7,869,579,951     |
| 1-12                         | 2022        | 99,172  | 221,541,618       | 373,880,074                                 | 3,887,360  | 23,412,613     | (179,638,430)                 | 981,601,920              | 8,671,543,441     |
| 1-12                         | 2023        | 94,202  |                   | 393,964,804                                 | 3,405,930  | 23,700,092     | (210,759,687)                 |                          |                   |
|                              |             |         | 210,311,139       |   |            |                |                               | 1,080,714,611            | 9,541,498,365     |
| 1-12                         | 2024        | 89,249  | 199,001,068       | 414,108,559                                 | 2,918,933  | 23,905,755     | (241,932,180)                 | 1,188,363,421            | 10,487,929,606    |
| 1-12                         | 2025        | 84,345  | 187,658,130       | 435,644,456                                 | 2,507,685  | 24,047,771     | (274,541,782)                 | 1,305,592,679            | 11,518,980,503    |
| 1-12                         | 2026        | 79,502  | 176,331,779       | 459,722,190                                 | 2,180,288  | 24,141,270     | (309,711,968)                 | 1,433,319,512            | 12,642,588,047    |
| 1-12                         | 2027        | 74,710  | 165,080,604       | 483,751,478                                 | 1,906,328  | 24,152,780     | (344,729,982)                 | 1,572,675,360            | 13,870,533,425    |
| 1-12                         | 2028        | 69,968  | 153,956,756       | 504,626,657                                 | 1,631,506  | 24,045,434     | (376,346,841)                 | 1,725,363,322            | 15,219,549,906    |
| 1-12                         | 2029        | 65,294  | 142,987,659       | 521,966,548                                 | 1,364,822  | 23,812,655     | (404,156,366)                 | 1,893,549,098            | 16,708,942,638    |
| 1-12                         | 2030        | 60,718  | 132,203,311       | 539,004,799                                 | 1,135,750  | 23,470,506     | (431,407,744)                 | 2,079,500,706            | 18,357,035,600    |
| 1-12                         | 2031        | 56,254  | 121,641,574       | 558,280,229                                 | 951,176    | 23,058,064     | (460,647,895)                 | 2,285,351,868            | 20,181,739,572    |
| 1-12                         | 2032        | 51,885  | 111,327,765       | 577,770,778                                 | 815,223    | 22,660,699     | (489,918,935)                 | 2,513,374,926            | 22,205,195,564    |
| 1-12                         | 2033        | 47,618  | 101,314,984       | 591,395,682                                 | 685,794    | 22,142,029     | (512,908,521)                 | 2,766,806,982            | 24,459,094,024    |
| 1-12                         | 2034        | 43,471  | 91,646,420        | 599,727,318                                 | 556,720    | 21,476,888     | (530,114,506)                 | 3,049,644,952            | 26,978,624,470    |
| 1-12                         | 2035        | 39,474  | 82,340,290        | 606,614,417                                 | 435,286    | 20,682,434     | (545,391,847)                 | 3,366,123,101            | 29,799,355,724    |
| 1-12                         | 2036        | 35,657  | 73,479,687        | 614,058,683                                 | 337,397    | 19,792,076     | (560,708,468)                 | 3,720,552,322            | 32,959,199,577    |
| 1-12                         | 2037        | 32,030  | 65,124,492        | 618,983,471                                 | 268,664    | 18,825,823     | (572,953,466)                 | 4,117,849,841            | 36,504,095,953    |
| 1-12                         | 2038        | 28,595  | 57,322,422        | 615,518,913                                 | 214,154    | 17,781,528     | (576,192,173)                 | 4,564,163,143            | 40,492,066,922    |
| 1-12                         | 2039        | 25,365  | 50,086,087        | 603,959,865                                 | 165,968    | 16,651,118     | (570,690,864)                 | 5,066,882,815            | 44,988,258,873    |
| 1-12                         | 2040        | 22,364  | 43,432,755        | 589,474,789                                 | 123,600    | 15,462,962     | (561,628,596)                 | 5,633,919,424            | 50,060,549,700    |
|                              |             |         |                   |   |            |                |                               |                          |                   |
| 1-12                         | 2041        | 19,607  | 37,389,850        | 574,966,945                                 | 89,744     | 14,265,872     | (551,932,712)                 | 6,273,595,687            | 55,782,212,676    |
| 1-12                         | 2042        | 17,091  | 31,962,611        | 557,053,936                                 | 65,926     | 13,093,630     | (538,250,881)                 | 6,995,285,355            | 62,239,247,150    |
| 1-12                         | 2043        | 14,806  | 27,134,548        | 531,609,781                                 | 50,599     | 11,943,747     | (516,469,579)                 | 7,810,105,053            | 69,532,882,624    |
| 1-12                         | 2044        | 12,745  | 22,874,351        | 500,375,134                                 | 38,684     | 10,805,046     | (488,344,513)                 | 8,730,774,764            | 77,775,312,875    |
| 1-12                         | 2045        | 10,905  | 19,145,498        | 468,334,699                                 | 29,746     | 9,693,356      | (458,912,303)                 | 9,771,128,547            | 87,087,529,119    |
| 1-12                         | 2046        | 9,279   | 15,914,975        | 438,114,684                                 | 22,303     | 8,636,619      | (430,858,631)                 | 10,946,203,878           | 97,602,874,367    |
| 1-12                         | 2047        | 7,851   | 13,138,654        | 408,476,443                                 | 16,273     | 7,654,212      | (403,008,274)                 | 12,272,837,446           | 109,472,703,539   |
| 1-12                         | 2048        | 6,605   | 10,774,947        | 376,289,127                                 | 11,797     | 6,753,998      | (372,279,974)                 | 13,770,285,412           | 122,870,708,977   |
| 1-12                         | 2049        | 5,521   | 8,777,852         | 342,413,795                                 | 8,319      | 5,923,852      | (339,568,113)                 | 15,460,437,075           | 137,991,577,939   |
| 1-12                         | 2050        | 4,584   | 7,098,066         | 309,513,714                                 | 5,547      | 5,157,676      | (307,578,872)                 | 17,367,652,336           | 155,051,651,403   |
| 1-12                         | 2051        | 3,782   | 5,695,635         | 279,384,459                                 | 3,549      | 4,452,864      | (278,145,237)                 | 19,519,064,978           | 174,292,571,144   |
| 1-12                         | 2052        | 3,100   | 4,533,153         | 252,715,908                                 | 2,359      | 3,814,271      | (251,999,384)                 | 21,945,062,541           | 195,985,634,301   |
| 1-12                         | 2053        | 2,524   | 3,577,784         | 226,780,559                                 | 1,467      | 3,249,204      | (226,453,446)                 | 24,679,955,362           | 220,439,136,216   |
| 1-12                         | 2054        | 2,042   | 2,800,123         | 200,575,200                                 | 833        | 2,749,026      | (200,524,936)                 | 27,762,693,869           | 248,001,305,149   |
| 1-12                         | 2055        | 1,639   | 2,171,711         | 175,529,878                                 | 385        | 2,308,856      | (175,667,409)                 | 31,237,077,420           | 279,062,715,160   |
| 1-12                         | 2056        | 1,306   | 1,667,816         | 152,646,166                                 | 89         | 1,925,041      | (152,903,480)                 | 35,152,242,532           | 314,062,054,213   |
| 1-12                         | 2057        | 1,033   | 1,267,848         | 132,205,250                                 | 07         | 1,592,690      | (132,530,092)                 | 39,563,440,344           | 353,492,964,465   |
| 1-12                         | 2058        | 811     |                   |   | -          |                |                               |                          |                   |
|                              |             |         | 953,971           | 113,791,169                                 | -          | 1,307,841      | (114,145,038)<br>(96,948,047) | 44,532,886,699           | 397,911,706,125   |
| 1-12                         | 2059        | 633     | 710,557           | 96,592,605                                  | -          | 1,065,999      |                               | 50,130,719,379           | 447,945,477,457   |
| 1-12                         | 2060        | 491     | 528,268           | 81,007,025                                  | -          | 861,999        | (81,340,757)                  | 56,435,957,979           | 504,300,094,680   |
| 1-12                         | 2061        | 378     | 393,029           | 67,534,843                                  | -          | 692,124        | (67,833,938)                  | 63,537,495,311           | 567,769,756,053   |
| 1-12                         | 2062        | 289     | 290,229           | 56,060,128                                  | -          | 552,562        | (56,322,462)                  | 71,535,402,530           | 639,248,836,121   |
| 1-12                         | 2063        | 220     | 212,735           | 46,332,471                                  | -          | 438,570        | (46,558,306)                  | 80,542,386,212           | 719,744,664,027   |
| 1-12                         | 2064        | 166     | 154,715           | 38,160,569                                  | -          | 345,995        | (38,351,849)                  | 90,685,382,271           | 810,391,694,449   |
| 1-12                         | 2065        | 125     | 111,585           | 31,339,195                                  | -          | 271,479        | (31,499,089)                  | 102,107,344,009          | 912,467,539,369   |
| 1-12                         | 2066        | 93      | 79,863            | 25,632,598                                  | -          | 211,790        | (25,764,525)                  | 114,969,265,036          | 1,027,411,039,880 |
| 1-12                         | 2067        | 69      | 56,654            | 20,924,166                                  | -          | 164,111        | (21,031,622)                  | 129,452,447,981          | 1,156,842,456,239 |
| 1-12                         | 2068        | 51      | 39,726            | 16,942,992                                  | -          | 126,538        | (17,029,804)                  | 145,761,059,731          | 1,302,586,486,167 |
| 1-12                         | 2069        | 37      | 27,430            | 13,560,292                                  | _          | 96,768         | (13,629,631)                  | 164,125,023,452          | 1,466,697,879,988 |
| 1-12                         | 2070        | 27      | 18,592            | 10,752,486                                  | _          | 73,166         | (10,807,059)                  | 184,803,239,074          | 1,651,490,312,002 |
| 1-6                          | 2071        | 23      | 6,742             | 4,484,883                                   | _          | 29,652         | (4,507,793)                   | 100,957,893,979          | 1,752,443,698,188 |
| . •                          | 20          | 23      | 0,172             | 1,101,000                                   |            | 27,002         | (.,00.,,70)                   | ,,0,0,,,,,               | ,,,0,0,100        |

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|                              |              |                 |                          | All Plans                  |                     |                        |                                |                                |                                  |
|------------------------------|--------------|-----------------|--------------------------|----------------------------|---------------------|------------------------|--------------------------------|--------------------------------|----------------------------------|
|                              |              |                 |                          |                            |                     | _                      | Starting Ra                    | ite Before Adjustments:        | Annual                           |
|                              |              |                 |                          |                            |                     |                        |                                | 6.25%                          |                                  |
| LTC Program Funded Rati      |              |                 | 164.15%                  |                            |                     |                        |                                | Projection Years 11+:          | 7.60%                            |
| Surplus/(Deficit) \$ = PV    |              |                 |                          | = Standard Program Defin   |                     |                        | Disc                           | ount Rate Adjustments:         | Scenario 3                       |
| Surplus/(Deficit) \$ as a Pe |              | miums):         | 47.72%                   | = Standard Program Defin   | ition               |                        |                                |                                |                                  |
| Fund Balance @ End of Pi     |              |                 | 114,752,470,367          | 100.00%                    |                     | 100.00%                |                                |                                |                                  |
| Totals - 7/2011 thru 6/20    | 71:          |                 | 5,545,681,269            | 19,529,919,673             | 90,896,489          | 750,438,987            | (14,825,573,880)               | 126,301,259,426                |                                  |
| As a % of Premiums:          |              |                 | 100.00%                  | 352.16%                    | 1.64%               | 13.53%                 | -267.34%                       | 2277.47%                       |                                  |
| Totals Present Values        |              |                 | 2 402 104 040            | 4 270 045 274              | E2 002 710          | 247 440 274            | (1.004.240.200)                | 0.454.124.444                  |                                  |
| Totals - Present Values:     |              |                 | 2,683,196,068<br>100.00% | 4,378,965,274<br>163.20%   | 53,002,718<br>1.98% | 247,468,376<br>9.22%   | (1,996,240,300)<br>-74.40%     | 9,454,134,446<br>352.35%       |                                  |
| As a % of PV(Premiums):      |              |                 | 100.00%                  | 103.20%                    | 1.90%               | 9.22%                  | -74.40%                        | 332.33%                        |                                  |
| <u>Months</u>                | <u>Year</u>  | Lives           | Total Premiums           | LTC Paid Claims            | RoP Claims          | Total Expenses         | <u>Earnings</u>                | Investment Earnings            | Fund Balance                     |
| <u></u>                      | 1001         | 21700           | Total Tromanis           | ero raia olamis            | itor oldiiris       | Total Exponsos         | <u>carriingo</u>               | mrostmont zamingo              | 3,276,784,822                    |
| 7-12                         | 2011         | 152,290         | 163,214,995              | 86,518,260                 | 3,387,165           | 8,981,681              | 64,327,889                     | 102,145,483                    | 3,443,258,194                    |
| 1-12                         | 2012         | 147,709         | 319,059,141              | 189,064,343                | 6,895,002           | 18,148,098             | 104,951,698                    | 236,769,785                    | 3,784,979,677                    |
| 1-12                         | 2013         | 143,043         | 310,506,451              | 213,621,901                | 7,167,348           | 18,746,908             | 70,970,294                     | 297,026,122                    | 4,152,976,093                    |
| 1-12                         | 2014         | 138,324         | 301,716,982              | 235,804,779                | 7,218,240           | 19,383,443             | 39,310,519                     | 366,001,370                    | 4,558,287,983                    |
| 1-12                         | 2015         | 133,569         | 292,812,777              | 252,377,141                | 6,975,166           | 20,045,063             | 13,415,407                     | 446,064,183                    | 5,017,767,573                    |
| 1-12                         | 2016         | 128,772         | 283,662,504              | 271,464,517                | 6,685,429           | 20,730,126             | (15,217,569)                   | 539,664,691                    | 5,542,214,695                    |
| 1-12                         | 2017         | 123,912         | 274,128,945              | 291,313,450                | 6,346,259           | 21,274,336             | (44,805,099)                   | 594,503,095                    | 6,091,912,691                    |
| 1-12                         | 2018         | 118,985         | 264,230,361              | 309,404,757                | 5,893,779           | 21,763,059             | (72,831,233)                   | 591,431,375                    | 6,610,512,833                    |
| 1-12                         | 2019         | 114,031         | 254,007,602              | 326,727,442                | 5,344,120           | 22,208,604             | (100,272,564)                  | 574,977,414                    | 7,085,217,683                    |
| 1-12                         | 2020         | 109,076         | 243,443,552              | 343,459,398                | 4,812,904           | 22,630,437             | (127,459,187)                  | 544,981,507                    | 7,502,740,003                    |
| 1-12                         | 2021         | 104,128         | 232,599,901              | 357,608,875                | 4,330,873           | 23,046,183             | (152,386,030)                  | 552,034,253                    | 7,902,388,226                    |
| 1-12                         | 2022         | 99,172          | 221,541,618              | 373,880,074                | 3,887,360           | 23,412,613             | (179,638,430)                  | 594,520,054                    | 8,317,269,850                    |
| 1-12                         | 2023         | 94,202          | 210,311,139              | 393,964,804                | 3,405,930           | 23,700,092             | (210,759,687)                  | 624,875,182                    | 8,731,385,345                    |
| 1-12                         | 2024         | 89,249          | 199,001,068              | 414,108,559                | 2,918,933           | 23,905,755             | (241,932,180)                  | 655,153,481                    | 9,144,606,645                    |
| 1-12                         | 2025         | 84,345          | 187,658,130              | 435,644,456                | 2,507,685           | 24,047,771             | (274,541,782)                  | 685,329,887                    | 9,555,394,750                    |
| 1-12                         | 2026         | 79,502          | 176,331,779              | 459,722,190                | 2,180,288           | 24,141,270             | (309,711,968)                  | 715,221,406                    | 9,960,904,188                    |
| 1-12                         | 2027         | 74,710          | 165,080,604              | 483,751,478                | 1,906,328           | 24,152,780             | (344,729,982)                  | 744,691,809                    | 10,360,866,015                   |
| 1-12                         | 2028         | 69,968          | 153,956,756              | 504,626,657                | 1,631,506           | 24,045,434             | (376,346,841)                  | 773,853,500                    | 10,758,372,673                   |
| 1-12                         | 2029         | 65,294          | 142,987,659              | 521,966,548                | 1,364,822           | 23,812,655             | (404,156,366)                  | 802,976,187                    | 11,157,192,495                   |
| 1-12                         | 2030         | 60,718          | 132,203,311              | 539,004,799                | 1,135,750           | 23,470,506             | (431,407,744)                  | 832,246,131                    | 11,558,030,882                   |
| 1-12                         | 2031         | 56,254          | 121,641,574              | 558,280,229                | 951,176             | 23,058,064             | (460,647,895)                  | 861,610,631                    | 11,958,993,618                   |
| 1-12                         | 2032         | 51,885          | 111,327,765              | 577,770,778                | 815,223             | 22,660,699             | (489,918,935)                  | 890,935,562                    | 12,360,010,244                   |
| 1-12                         | 2033         | 47,618          | 101,314,984              | 591,395,682                | 685,794             | 22,142,029             | (512,908,521)                  | 920,487,360                    | 12,767,589,084                   |
| 1-12                         | 2034         | 43,471          | 91,646,420               | 599,727,318                | 556,720             | 21,476,888             | (530,114,506)                  | 950,762,832                    | 13,188,237,410                   |
| 1-12                         | 2035         | 39,474          | 82,340,290               | 606,614,417                | 435,286             | 20,682,434             | (545,391,847)                  | 982,134,992                    | 13,624,980,555                   |
| 1-12                         | 2036         | 35,657          | 73,479,687               | 614,058,683                | 337,397             | 19,792,076             | (560,708,468)                  | 1,014,730,190                  | 14,079,002,277                   |
| 1-12                         | 2037         | 32,030          | 65,124,492               | 618,983,471                | 268,664             | 18,825,823             | (572,953,466)                  | 1,048,723,938                  | 14,554,772,749                   |
| 1-12                         | 2038         | 28,595          | 57,322,422               | 615,518,913                | 214,154             | 17,781,528             | (576,192,173)                  | 1,084,674,281                  | 15,063,254,857                   |
| 1-12                         | 2039         | 25,365          | 50,086,087               | 603,959,865                | 165,968             | 16,651,118             | (570,690,864)                  | 1,123,462,440                  | 15,616,026,433                   |
| 1-12                         | 2040         | 22,364          | 43,432,755               | 589,474,789                | 123,600             | 15,462,962             | (561,628,596)                  | 1,165,787,152                  | 16,220,184,988                   |
| 1-12                         | 2041         | 19,607          | 37,389,850               | 574,966,945                | 89,744              | 14,265,872             | (551,932,712)                  | 1,212,048,311                  | 16,880,300,587                   |
| 1-12                         | 2042         | 17,091          | 31,962,611               | 557,053,936                | 65,926              | 13,093,630             | (538,250,881)                  | 1,262,679,467                  | 17,604,729,173                   |
| 1-12                         | 2043         | 14,806          | 27,134,548               | 531,609,781                | 50,599              | 11,943,747             | (516,469,579)                  | 1,318,486,186                  | 18,406,745,781                   |
| 1-12                         | 2044         | 12,745          | 22,874,351               | 500,375,134                | 38,684              | 10,805,046             | (488,344,513)                  | 1,380,455,781                  | 19,298,857,049                   |
| 1-12<br>1-12                 | 2045<br>2046 | 10,905<br>9,279 | 19,145,498<br>15,914,975 | 468,334,699<br>438,114,684 | 29,746<br>22,303    | 9,693,356<br>8,636,619 | (458,912,303)<br>(430,858,631) | 1,449,354,922<br>1,525,683,720 | 20,289,299,668<br>21,384,124,758 |
| 1-12                         | 2047         | 7,851           | 13,138,654               | 408,476,443                | 16,273              | 7,654,212              | (403,008,274)                  | 1,609,923,797                  | 22,591,040,281                   |
| 1-12                         | 2047         | 6,605           | 10,774,947               | 376,289,127                | 11,797              | 6,753,998              | (372,279,974)                  | 1,702,773,722                  | 23,921,534,029                   |
| 1-12                         | 2049         | 5,521           | 8,777,852                | 342,413,795                | 8,319               | 5,923,852              | (339,568,113)                  | 1,805,108,739                  | 25,387,074,654                   |
| 1-12                         | 2050         | 4,584           | 7,098,066                | 309,513,714                | 5,547               | 5,157,676              | (307,578,872)                  | 1,917,696,731                  | 26,997,192,514                   |
| 1-12                         | 2051         | 3,782           | 5,695,635                | 279,384,459                | 3,549               | 4,452,864              | (278,145,237)                  | 2,041,185,979                  | 28,760,233,256                   |
| 1-12                         | 2052         | 3,100           | 4,533,153                | 252,715,908                | 2,359               | 3,814,271              | (251,999,384)                  | 2,176,174,742                  | 30,684,408,614                   |
| 1-12                         | 2053         | 2,524           | 3,577,784                | 226,780,559                | 1,467               | 3,249,204              | (226,453,446)                  | 2,323,364,455                  | 32,781,319,622                   |
| 1-12                         | 2054         | 2,042           | 2,800,123                | 200,575,200                | 833                 | 2,749,026              | (200,524,936)                  | 2,483,700,532                  | 35,064,495,218                   |
| 1-12                         | 2055         | 1,639           | 2,171,711                | 175,529,878                | 385                 | 2,308,856              | (175,667,409)                  | 2,658,164,058                  | 37,546,991,867                   |
| 1-12                         | 2056         | 1,306           | 1,667,816                | 152,646,166                | 89                  | 1,925,041              | (152,903,480)                  | 2,847,701,307                  | 40,241,789,694                   |
| 1-12                         | 2057         | 1,033           | 1,267,848                | 132,205,250                | _                   | 1,592,690              | (132,530,092)                  | 3,053,284,480                  | 43,162,544,082                   |
| 1-12                         | 2058         | 811             | 953,971                  | 113,791,169                | -                   | 1,307,841              | (114,145,038)                  | 3,275,961,714                  | 46,324,360,758                   |
| 1-12                         | 2059         | 633             | 710,557                  | 96,592,605                 | -                   | 1,065,999              | (96,948,047)                   | 3,516,910,835                  | 49,744,323,545                   |
| 1-12                         | 2060         | 491             | 528,268                  | 81,007,025                 | -                   | 861,999                | (81,340,757)                   | 3,777,425,635                  | 53,440,408,424                   |
| 1-12                         | 2061         | 378             | 393,029                  | 67,534,843                 | -                   | 692,124                | (67,833,938)                   | 4,058,847,996                  | 57,431,422,482                   |
| 1-12                         | 2062         | 289             | 290,229                  | 56,060,128                 | -                   | 552,562                | (56,322,462)                   | 4,362,608,600                  | 61,737,708,620                   |
| 1-12                         | 2063         | 220             | 212,735                  | 46,332,471                 | -                   | 438,570                | (46,558,306)                   | 4,690,262,858                  | 66,381,413,172                   |
| 1-12                         | 2064         | 166             | 154,715                  | 38,160,569                 | -                   | 345,995                | (38,351,849)                   | 5,043,501,450                  | 71,386,562,773                   |
| 1-12                         | 2065         | 125             | 111,585                  | 31,339,195                 | -                   | 271,479                | (31,499,089)                   | 5,424,157,702                  | 76,779,221,386                   |
| 1-12                         | 2066         | 93              | 79,863                   | 25,632,598                 | -                   | 211,790                | (25,764,525)                   | 5,834,221,293                  | 82,587,678,154                   |
| 1-12                         | 2067         | 69              | 56,654                   | 20,924,166                 | -                   | 164,111                | (21,031,622)                   | 6,275,847,444                  | 88,842,493,976                   |
| 1-12                         | 2068         | 51              | 39,726                   | 16,942,992                 | -                   | 126,538                | (17,029,804)                   | 6,751,367,367                  | 95,576,831,539                   |
| 1-12                         | 2069         | 37              | 27,430                   | 13,560,292                 | -                   | 96,768                 | (13,629,631)                   | 7,263,308,248                  | 102,826,510,157                  |
| 1-12                         | 2070         | 27              | 18,592                   | 10,752,486                 | -                   | 73,166                 | (10,807,059)                   | 7,814,393,201                  | 110,630,096,299                  |
| 1-6                          | 2071         | 23              | 6,742                    | 4,484,883                  | -                   | 29,652                 | (4,507,793)                    | 4,126,881,861                  | 114,752,470,367                  |
|                              |              |                 |                          |                            |                     |                        |                                |                                |                                  |

## Attachment B(4) Intvestment Rate Increased 3%

|                             |             |          |                          | All Plan                 | S                      |                |                  |                           |                 |
|-----------------------------|-------------|----------|--------------------------|--------------------------|------------------------|----------------|------------------|---------------------------|-----------------|
|                             |             |          |                          | Starting Ra              | te Before Adjustments: | Annual         |                  |                           |                 |
|                             |             |          |                          |                          |                        |                | F                | 6.25%                     |                 |
| LTC Program Funded Rat      |             |          | 240.50%                  |                          |                        | L              |                  | Projection Years 11+:     | 7.60%           |
| Surplus/(Deficit) \$ = PV   |             |          |                          | = Standard Program Defin |                        |                | Disco            | ount Rate Adjustments:    | Scenario 4      |
| Surplus/(Deficit) \$ as a P |             | emiums): | 76.98%                   | = Standard Program Defin | ition                  |                |                  |                           |                 |
| Fund Balance @ End of F     |             |          | 712,311,185,078          | 100.00%                  |                        | 100.00%        |                  |                           |                 |
| Totals - 7/2011 thru 6/20   | 071:        |          | 5,545,681,269            | 19,529,919,673           | 90,896,489             | 750,438,987    | (14,825,573,880) | 723,859,974,137           |                 |
| As a % of Premiums:         |             |          | 100.00%                  | 352.16%                  | 1.64%                  | 13.53%         | -267.34%         | 13052.68%                 |                 |
| Table Barrell Wilson        |             |          | 0.407.704.000            | 2 504 5 / 7 00 /         | E0 47E 000             | 047.04/.500    | (4.0/0.405.540)  | 44407 550 470             |                 |
| Totals - Present Values:    |             |          | 2,486,604,222<br>100.00% | 3,581,567,826<br>144.03% | 50,175,383             | 217,346,523    | (1,362,485,510)  | 14,186,558,170<br>570.52% |                 |
| As a % of PV(Premiums)      | •           |          | 100.00%                  | 144.03%                  | 2.02%                  | 8.74%          | -54.79%          | 370.3276                  |                 |
| <u>Months</u>               | <u>Year</u> | Lives    | Total Premiums           | LTC Paid Claims          | RoP Claims             | Total Expenses | <u>Earnings</u>  | Investment Earnings       | Fund Balance    |
| INIOTILIS                   | <u>rear</u> | Lives    | Total Fremiums           | LTC Falu ClailTis        | KUF CIAIITIS           | Total Expenses | Larrings         | investment Lamings        | 3,276,784,822   |
| 7-12                        | 2011        | 152,290  | 163,214,995              | 86,518,260               | 3,387,165              | 8,981,681      | 64,327,889       | 150,103,640               | 3,491,216,351   |
| 1-12                        | 2012        | 147,709  | 319,059,141              | 189,064,343              | 6,895,002              | 18,148,098     | 104,951,698      | 328,761,576               | 3,924,929,625   |
| 1-12                        | 2013        | 143,043  | 310,506,451              | 213,621,901              | 7,167,348              | 18,746,908     | 70,970,294       | 367,403,434               | 4,363,303,353   |
| 1-12                        | 2014        | 138,324  | 301,716,982              | 235,804,779              | 7,218,240              | 19,383,443     | 39,310,519       | 406,370,287               | 4,808,984,159   |
| 1-12                        | 2015        | 133,569  | 292,812,777              | 252,377,141              | 6,975,166              | 20,045,063     | 13,415,407       | 446,412,882               | 5,268,812,449   |
| 1-12                        | 2016        | 128,772  | 283,662,504              | 271,464,517              | 6,685,429              | 20,730,126     | (15,217,569)     | 487,646,791               | 5,741,241,671   |
| 1-12                        | 2017        | 123,912  | 274,128,945              | 291,313,450              | 6,346,259              | 21,274,336     | (44,805,099)     | 529,963,178               | 6,226,399,750   |
| 1-12                        | 2018        | 118,985  | 264,230,361              | 309,404,757              | 5,893,779              | 21,763,059     | (72,831,233)     | 573,522,873               | 6,727,091,390   |
| 1-12                        | 2019        | 114,031  | 254,007,602              | 326,727,442              | 5,344,120              | 22,208,604     | (100,272,564)    | 618,573,905               | 7,245,392,732   |
| 1-12                        | 2020        | 109,076  | 243,443,552              | 343,459,398              | 4,812,904              | 22,630,437     | (127,459,187)    | 665,206,315               | 7,783,139,859   |
| 1-12                        | 2021        | 104,128  | 232,599,901              | 357,608,875              | 4,330,873              | 23,046,183     | (152,386,030)    | 765,457,584               | 8,396,211,413   |
| 1-12                        | 2022        | 99,172   | 221,541,618              | 373,880,074              | 3,887,360              | 23,412,613     | (179,638,430)    | 881,587,120               | 9,098,160,104   |
| 1-12                        | 2023        | 94,202   | 210,311,139              | 393,964,804              | 3,405,930              | 23,700,092     | (210,759,687)    | 954,361,168               | 9,841,761,585   |
| 1-12                        | 2024        | 89,249   | 199,001,068              | 414,108,559              | 2,918,933              | 23,905,755     | (241,932,180)    | 1,031,524,485             | 10,631,353,889  |
| 1-12                        | 2025        | 84,345   | 187,658,130              | 435,644,456              | 2,507,685              | 24,047,771     | (274,541,782)    | 1,113,515,853             | 11,470,327,960  |
| 1-12                        | 2026        | 79,502   | 176,331,779              | 459,722,190              | 2,180,288              | 24,141,270     | (309,711,968)    | 1,200,602,889             | 12,361,218,881  |
| 1-12                        | 2027        | 74,710   | 165,080,604              | 483,751,478              | 1,906,328              | 24,152,780     | (344,729,982)    | 1,293,165,270             | 13,309,654,169  |
| 1-12                        | 2028        | 69,968   | 153,956,756              | 504,626,657              | 1,631,506              | 24,045,434     | (376,346,841)    | 1,391,983,992             | 14,325,291,320  |
| 1-12                        | 2029        | 65,294   | 142,987,659              | 521,966,548              | 1,364,822              | 23,812,655     | (404, 156, 366)  | 1,498,131,027             | 15,419,265,980  |
| 1-12                        | 2030        | 60,718   | 132,203,311              | 539,004,799              | 1,135,750              | 23,470,506     | (431,407,744)    | 1,612,647,898             | 16,600,506,134  |
| 1-12                        | 2031        | 56,254   | 121,641,574              | 558,280,229              | 951,176                | 23,058,064     | (460,647,895)    | 1,736,333,282             | 17,876,191,521  |
| 1-12                        | 2032        | 51,885   | 111,327,765              | 577,770,778              | 815,223                | 22,660,699     | (489,918,935)    | 1,869,961,583             | 19,256,234,169  |
| 1-12                        | 2033        | 47,618   | 101,314,984              | 591,395,682              | 685,794                | 22,142,029     | (512,908,521)    | 2,014,960,888             | 20,758,286,536  |
| 1-12                        | 2034        | 43,471   | 91,646,420               | 599,727,318              | 556,720                | 21,476,888     | (530,114,506)    | 2,173,205,549             | 22,401,377,579  |
| 1-12                        | 2035        | 39,474   | 82,340,290               | 606,614,417              | 435,286                | 20,682,434     | (545,391,847)    | 2,346,544,085             | 24,202,529,817  |
| 1-12                        | 2036        | 35,657   | 73,479,687               | 614,058,683              | 337,397                | 19,792,076     | (560,708,468)    | 2,536,636,896             | 26,178,458,245  |
| 1-12                        | 2037        | 32,030   | 65,124,492               | 618,983,471              | 268,664                | 18,825,823     | (572,953,466)    | 2,745,374,332             | 28,350,879,111  |
| 1-12                        | 2038        | 28,595   | 57,322,422               | 615,518,913              | 214,154                | 17,781,528     | (576,192,173)    | 2,975,361,332             | 30,750,048,269  |
| 1-12                        | 2039        | 25,365   | 50,086,087               | 603,959,865              | 165,968                | 16,651,118     | (570,690,864)    | 3,229,872,104             | 33,409,229,509  |
| 1-12                        | 2040        | 22,364   | 43,432,755               | 589,474,789              | 123,600                | 15,462,962     | (561,628,596)    | 3,512,181,185             | 36,359,782,099  |
| 1-12                        | 2041        | 19,607   | 37,389,850               | 574,966,945              | 89,744                 | 14,265,872     | (551,932,712)    | 3,825,418,786             | 39,633,268,173  |
| 1-12                        | 2042        | 17,091   | 31,962,611               | 557,053,936              | 65,926                 | 13,093,630     | (538,250,881)    | 4,173,049,920             | 43,268,067,212  |
| 1-12                        | 2043        | 14,806   | 27,134,548               | 531,609,781              | 50,599                 | 11,943,747     | (516,469,579)    | 4,559,379,623             | 47,310,977,255  |
| 1-12                        | 2044        | 12,745   | 22,874,351               | 500,375,134              | 38,684                 | 10,805,046     | (488,344,513)    | 4,989,338,813             | 51,811,971,555  |
| 1-12                        | 2045        | 10,905   | 19,145,498               | 468,334,699              | 29,746                 | 9,693,356      | (458,912,303)    | 5,467,969,488             | 56,821,028,740  |
| 1-12                        | 2046        | 9,279    | 15,914,975               | 438,114,684              | 22,303                 | 8,636,619      | (430,858,631)    | 6,000,394,466             | 62,390,564,575  |
| 1-12                        | 2047        | 7,851    | 13,138,654               | 408,476,443              | 16,273                 | 7,654,212      | (403,008,274)    | 6,592,199,844             | 68,579,756,145  |
| 1-12                        | 2048        | 6,605    | 10,774,947               | 376,289,127              | 11,797                 | 6,753,998      | (372,279,974)    | 7,249,814,901             | 75,457,291,072  |
| 1-12                        | 2049        | 5,521    | 8,777,852                | 342,413,795              | 8,319                  | 5,923,852      | (339,568,113)    | 7,980,523,791             | 83,098,246,749  |
| 1-12                        | 2050        | 4,584    | 7,098,066                | 309,513,714              | 5,547                  | 5,157,676      | (307,578,872)    | 8,792,140,691             | 91,582,808,569  |
| 1-12                        | 2051        | 3,782    | 5,695,635                | 279,384,459              | 3,549                  | 4,452,864      | (278,145,237)    | 9,693,059,654             | 100,997,722,986 |
| 1-12                        | 2052        | 3,100    | 4,533,153                | 252,715,908              | 2,359                  | 3,814,271      | (251,999,384)    | 10,692,425,775            | 111,438,149,376 |
| 1-12                        | 2053        | 2,524    | 3,577,784                | 226,780,559              | 1,467                  | 3,249,204      | (226,453,446)    | 11,800,433,139            | 123,012,129,069 |
| 1-12                        | 2054        | 2,042    | 2,800,123                | 200,575,200              | 833                    | 2,749,026      | (200,524,936)    | 13,028,622,796            | 135,840,226,929 |
| 1-12                        | 2055        | 1,639    | 2,171,711                | 175,529,878              | 385                    | 2,308,856      | (175,667,409)    | 14,389,709,267            | 150,054,268,788 |
| 1-12                        | 2056        | 1,306    | 1,667,816                | 152,646,166              | 89                     | 1,925,041      | (152,903,480)    | 15,897,602,153            | 165,798,967,461 |
| 1-12                        | 2057        | 1,033    | 1,267,848                | 132,205,250              | -                      | 1,592,690      | (132,530,092)    | 17,567,621,157            | 183,234,058,526 |
| 1-12                        | 2058        | 811      | 953,971                  | 113,791,169              | -                      | 1,307,841      | (114,145,038)    | 19,416,712,556            | 202,536,626,043 |
| 1-12                        | 2059        | 633      | 710,557                  | 96,592,605               | -                      | 1,065,999      | (96,948,047)     | 21,463,688,611            | 223,903,366,607 |
| 1-12                        | 2060        | 491      | 528,268                  | 81,007,025               | -                      | 861,999        | (81,340,757)     | 23,729,392,880            | 247,551,418,730 |
| 1-12                        | 2061        | 378      | 393,029                  | 67,534,843               | -                      | 692,124        | (67,833,938)     | 26,236,808,286            | 273,720,393,078 |
| 1-12                        | 2062        | 289      | 290,229                  | 56,060,128               | -                      | 552,562        | (56,322,462)     | 29,011,335,406            | 302,675,406,022 |
| 1-12                        | 2063        | 220      | 212,735                  | 46,332,471               | -                      | 438,570        | (46,558,306)     | 32,081,089,558            | 334,709,937,274 |
| 1-12                        | 2064        | 166      | 154,715                  | 38,160,569               | -                      | 345,995        | (38,351,849)     | 35,477,190,087            | 370,148,775,512 |
| 1-12                        | 2065        | 125      | 111,585                  | 31,339,195               | -                      | 271,479        | (31,499,089)     | 39,234,074,730            | 409,351,351,153 |
| 1-12                        | 2066        | 93       | 79,863                   | 25,632,598               | -                      | 211,790        | (25,764,525)     | 43,389,855,349            | 452,715,441,978 |
| 1-12                        | 2067        | 69       | 56,654                   | 20,924,166               | -                      | 164,111        | (21,031,622)     | 47,986,703,683            | 500,681,114,038 |
| 1-12                        | 2068        | 51       | 39,726                   | 16,942,992               | -                      | 126,538        | (17,029,804)     | 53,071,278,634            | 553,735,362,869 |
| 1-12                        | 2069        | 37       | 27,430                   | 13,560,292               | -                      | 96,768         | (13,629,631)     | 58,695,211,217            | 612,416,944,454 |
| 1-12                        | 2070        | 27       | 18,592                   | 10,752,486               | -                      | 73,166         | (10,807,059)     | 64,915,610,737            | 677,321,748,132 |
| 1-6                         | 2071        | 23       | 6,742                    | 4,484,883                | -                      | 29,652         | (4,507,793)      | 34,993,944,739            | 712,311,185,078 |
|                             |             |          |                          |                          |                        |                |                  |                           |                 |

## Attachment B(5) Intvestment Rate Decreasing ½% for 10 Years

|                             |             |         |                  | All Plans                 | S             |                |                            |   |                                |
|-----------------------------|-------------|---------|------------------|---------------------------|---------------|----------------|----------------------------|---|--------------------------------|
|                             |             |         |                  |                           |               | _              |                            | te Before Adjustments: Projection Years 1 - 10: | Annual                         |
|                             |             |         |                  |                           |               |                | F                          | 6.25%   |                                |
| LTC Program Funded Rat      |             |         | 51.31%           |                           |               | L              |                            | Projection Years 11+:                           | 7.60%                          |
| Surplus/(Deficit) \$ = PV   |             |         |                  | = Standard Program Defini |               |                | Discount Rate Adjustments: |   | Scenario 5                     |
| Surplus/(Deficit) \$ as a P |             | miums): | -82.55%          | = Standard Program Defini | ition         |                |                            |   |                                |
| Fund Balance @ End of P     |             |         | (16,629,196,864) | 100.00%                   |               | 100.00%        |                            |   |                                |
| Totals - 7/2011 thru 6/20   | 071:        |         | 5,545,681,269    | 19,529,919,673            | 90,896,489    | 750,438,987    | (14,825,573,880)           | (5,080,407,805)                                 |                                |
| As a % of Premiums:         |             |         | 100.00%          | 352.16%                   | 1.64%         | 13.53%         | -267.34%                   | -91.61%   |                                |
|                             |             |         |                  |                           |               |                |                            |   |                                |
| Totals - Present Values:    |             |         | 3,766,785,342    | 9,652,932,984             | 67,188,529    | 432,876,878    | (6,386,213,049)            | 5,753,951                                       |                                |
| As a % of PV(Premiums)      |             |         | 100.00%          | 256.26%                   | 1.78%         | 11.49%         | -169.54%                   | 0.15%   |                                |
| M H                         |             | 12      | T-1-1 D          | LTO D. 1 LOL 1            | D. D. Oleiter | T. I. I. F     | E                          | to a to a to the first to the total             | F   D.                         |
| <u>Months</u>               | <u>Year</u> | Lives   | Total Premiums   | LTC Paid Claims           | RoP Claims    | Total Expenses | <u>Earnings</u>            | Investment Earnings                             | Fund Balance                   |
| 7-12                        | 2011        | 152,290 | 163,214,995      | 86,518,260                | 3,387,165     | 8,981,681      | 64,327,889                 | 102,145,483                                     | 3,276,784,822<br>3,443,258,194 |
| 1-12                        | 2012        | 147,709 | 319,059,141      | 189,064,343               | 6,895,002     | 18,148,098     | 104,951,698                | 210,315,302                                     | 3,758,525,194                  |
| 1-12                        | 2012        | 143,043 | 310,506,451      | 213,621,901               | 7,167,348     | 18,746,908     | 70,970,294                 | 209,260,973                                     | 4,038,756,462                  |
| 1-12                        | 2014        | 138,324 | 301,716,982      | 235,804,779               | 7,107,340     | 19,383,443     | 39,310,519                 | 203,402,908                                     | 4,281,469,889                  |
| 1-12                        | 2014        | 133,569 | 292,812,777      | 252,377,141               | 6,975,166     | 20,045,063     | 13,415,407                 | 193,417,039                                     | 4,488,302,336                  |
| 1-12                        | 2016        | 128,772 | 283,662,504      | 271,464,517               | 6,685,429     | 20,730,126     | (15,217,569)               | 179,647,343                                     | 4,652,732,110                  |
| 1-12                        | 2017        | 123,912 | 274,128,945      | 291,313,450               | 6,346,259     | 21,274,336     | (44,805,099)               | 162,435,346                                     | 4,770,362,357                  |
| 1-12                        | 2017        | 118,985 | 264,230,361      | 309,404,757               | 5,893,779     | 21,763,059     | (72,831,233)               | 142,346,126                                     | 4,839,877,250                  |
| 1-12                        | 2019        | 114,031 | 254,007,602      | 326,727,442               | 5,344,120     | 22,208,604     | (100,272,564)              | 120,035,726                                     | 4,859,640,412                  |
| 1-12                        | 2020        | 109,076 | 243,443,552      | 343,459,398               | 4,812,904     | 22,630,437     | (127,459,187)              | 96,162,908                                      | 4,828,344,133                  |
| 1-12                        | 2021        | 104,128 | 232,599,901      | 357,608,875               | 4,330,873     | 23,046,183     | (152,386,030)              | 103,345,269                                     | 4,779,303,373                  |
| 1-12                        | 2022        | 99,172  | 221,541,618      | 373,880,074               | 3,887,360     | 23,412,613     | (179,638,430)              | 122,170,039                                     | 4,721,834,982                  |
| 1-12                        | 2023        | 94,202  | 210,311,139      | 393,964,804               | 3,405,930     | 23,700,092     | (210,759,687)              | 120,270,394                                     | 4,631,345,689                  |
| 1-12                        | 2024        | 89,249  | 199,001,068      | 414,108,559               | 2,918,933     | 23,905,755     | (241,932,180)              | 117,505,833                                     | 4,506,919,341                  |
| 1-12                        | 2025        | 84,345  | 187,658,130      | 435,644,456               | 2,507,685     | 24,047,771     | (274,541,782)              | 113,847,149                                     | 4,346,224,709                  |
| 1-12                        | 2026        | 79,502  | 176,331,779      | 459,722,190               | 2,180,288     | 24,141,270     | (309,711,968)              | 109,211,026                                     | 4,145,723,766                  |
| 1-12                        | 2027        | 74,710  | 165,080,604      | 483,751,478               | 1,906,328     | 24,152,780     | (344,729,982)              | 103,533,134                                     | 3,904,526,918                  |
| 1-12                        | 2028        | 69,968  | 153,956,756      | 504,626,657               | 1,631,506     | 24,045,434     | (376,346,841)              | 96,836,129                                      | 3,625,016,206                  |
| 1-12                        | 2029        | 65,294  | 142,987,659      | 521,966,548               | 1,364,822     | 23,812,655     | (404,156,366)              | 89,193,851                                      | 3,310,053,691                  |
| 1-12                        | 2030        | 60,718  | 132,203,311      | 539,004,799               | 1,135,750     | 23,470,506     | (431,407,744)              | 80,646,115                                      | 2,959,292,062                  |
| 1-12                        | 2031        | 56,254  | 121,641,574      | 558,280,229               | 951,176       | 23,058,064     | (460,647,895)              | 71,147,272                                      | 2,569,791,439                  |
| 1-12                        | 2032        | 51,885  | 111,327,765      | 577,770,778               | 815,223       | 22,660,699     | (489,918,935)              | 60,624,408                                      | 2,140,496,912                  |
| 1-12                        | 2033        | 47,618  | 101,314,984      | 591,395,682               | 685,794       | 22,142,029     | (512,908,521)              | 49,143,783                                      | 1,676,732,175                  |
| 1-12                        | 2034        | 43,471  | 91,646,420       | 599,727,318               | 556,720       | 21,476,888     | (530,114,506)              | 36,844,486                                      | 1,183,462,155                  |
| 1-12                        | 2035        | 39,474  | 82,340,290       | 606,614,417               | 435,286       | 20,682,434     | (545,391,847)              | 23,813,620                                      | 661,883,928                    |
| 1-12                        | 2036        | 35,657  | 73,479,687       | 614,058,683               | 337,397       | 19,792,076     | (560,708,468)              | 10,046,673                                      | 111,222,133                    |
| 1-12                        | 2037        | 32,030  | 65,124,492       | 618,983,471               | 268,664       | 18,825,823     | (572,953,466)              | (4,446,928)                                     | (466,178,261)                  |
| 1-12                        | 2038        | 28,595  | 57,322,422       | 615,518,913               | 214,154       | 17,781,528     | (576,192,173)              | (19,530,903)                                    | (1,061,901,338)                |
| 1-12                        | 2039        | 25,365  | 50,086,087       | 603,959,865               | 165,968       | 16,651,118     | (570,690,864)              | (34,970,039)                                    | (1,667,562,241)                |
| 1-12                        | 2040        | 22,364  | 43,432,755       | 589,474,789               | 123,600       | 15,462,962     | (561,628,596)              | (50,608,852)                                    | (2,279,799,690)                |
| 1-12                        | 2041        | 19,607  | 37,389,850       | 574,966,945               | 89,744        | 14,265,872     | (551,932,712)              | (66,407,982)                                    | (2,898,140,383)                |
| 1-12                        | 2042        | 17,091  | 31,962,611       | 557,053,936               | 65,926        | 13,093,630     | (538,250,881)              | (82,325,269)                                    | (3,518,716,532)                |
| 1-12                        | 2043        | 14,806  | 27,134,548       | 531,609,781               | 50,599        | 11,943,747     | (516,469,579)              | (98,201,388)                                    | (4,133,387,500)                |
| 1-12                        | 2044        | 12,745  | 22,874,351       | 500,375,134               | 38,684        | 10,805,046     | (488,344,513)              | (113,832,257)                                   | (4,735,564,270)                |
| 1-12                        | 2045        | 10,905  | 19,145,498       | 468,334,699               | 29,746        | 9,693,356      | (458,912,303)              | (129,109,975)                                   | (5,323,586,548)                |
| 1-12                        | 2046        | 9,279   | 15,914,975       | 438,114,684               | 22,303        | 8,636,619      | (430,858,631)              | (144,034,712)                                   | (5,898,479,890)                |
| 1-12                        | 2047        | 7,851   | 13,138,654       | 408,476,443               | 16,273        | 7,654,212      | (403,008,274)              | (158,625,573)                                   | (6,460,113,736)                |
| 1-12                        | 2048        | 6,605   | 10,774,947       | 376,289,127               | 11,797        | 6,753,998      | (372,279,974)              | (172,840,261)                                   | (7,005,233,971)                |
| 1-12                        | 2049        | 5,521   | 8,777,852        | 342,413,795               | 8,319         | 5,923,852      | (339,568,113)              | (186,593,525)                                   | (7,531,395,610)                |
| 1-12                        | 2050        | 4,584   | 7,098,066        | 309,513,714               | 5,547         | 5,157,676      | (307,578,872)              | (199,857,563)                                   | (8,038,832,045)                |
| 1-12                        | 2051        | 3,782   | 5,695,635        | 279,384,459               | 3,549         | 4,452,864      | (278,145,237)              | (212,664,640)                                   | (8,529,641,921)                |
| 1-12                        | 2052        | 3,100   | 4,533,153        | 252,715,908               | 2,359         | 3,814,271      | (251,999,384)              | (225,081,719)                                   | (9,006,723,025)                |
| 1-12                        | 2053        | 2,524   | 3,577,784        | 226,780,559               | 1,467         | 3,249,204      | (226,453,446)              | (237,157,397)                                   | (9,470,333,868)                |
| 1-12                        | 2054        | 2,042   | 2,800,123        | 200,575,200               | 833           | 2,749,026      | (200,524,936)              | (248,876,493)                                   | (9,919,735,297)                |
| 1-12                        | 2055        | 1,639   | 2,171,711        | 175,529,878               | 385           | 2,308,856      | (175,667,409)              | (260,236,060)                                   | (10,355,638,765)               |
| 1-12                        | 2056        | 1,306   | 1,667,816        | 152,646,166               | 89            | 1,925,041      | (152,903,480)              | (271,270,442)                                   | (10,779,812,687)               |
| 1-12                        | 2057        | 1,033   | 1,267,848        | 132,205,250               | -             | 1,592,690      | (132,530,092)              | (282,030,537)                                   | (11,194,373,315)               |
| 1-12                        | 2058        | 811     | 953,971          | 113,791,169               | -             | 1,307,841      | (114,145,038)              | (292,567,793)                                   | (11,601,086,147)               |
| 1-12                        | 2059        | 633     | 710,557          | 96,592,605                | -             | 1,065,999      | (96,948,047)               | (302,917,836)                                   | (12,000,952,030)               |
| 1-12                        | 2060        | 491     | 528,268          | 81,007,025                | -             | 861,999        | (81,340,757)               | (313,108,299)                                   | (12,395,401,085)               |
| 1-12                        | 2061        | 378     | 393,029          | 67,534,843                | -             | 692,124        | (67,833,938)               | (323,184,728)                                   | (12,786,419,751)               |
| 1-12                        | 2062        | 289     | 290,229          | 56,060,128                | -             | 552,562        | (56,322,462)               | (333,198,299)                                   | (13,175,940,512)               |
| 1-12                        | 2063        | 220     | 212,735          | 46,332,471                | -             | 438,570        | (46,558,306)               | (343,196,033)                                   | (13,565,694,850)               |
| 1-12                        | 2064        | 166     | 154,715          | 38,160,569                | -             | 345,995        | (38,351,849)               | (353,220,343)                                   | (13,957,267,042)               |
| 1-12                        | 2065        | 125     | 111,585          | 31,339,195                | -             | 271,479        | (31,499,089)               | (363,309,900)                                   | (14,352,076,031)               |
| 1-12                        | 2066        | 93      | 79,863           | 25,632,598                | -             | 211,790        | (25,764,525)               | (373,498,559)                                   | (14,751,339,115)               |
| 1-12                        | 2067        | 69      | 56,654           | 20,924,166                | -             | 164,111        | (21,031,622)               | (383,816,160)                                   | (15,156,186,897)               |
| 1-12                        | 2068        | 51      | 39,726           | 16,942,992                | -             | 126,538        | (17,029,804)               | (394,289,136)                                   | (15,567,505,836)               |
| 1-12                        | 2069        | 37      | 27,430           | 13,560,292                | -             | 96,768         | (13,629,631)               | (404,938,187)                                   | (15,986,073,654)               |
| 1-12                        | 2070        | 27      | 18,592           | 10,752,486                | -             | 73,166         | (10,807,059)               | (415,783,242)                                   | (16,412,663,955)               |
| 1-6                         | 2071        | 23      | 6,742            | 4,484,883                 | -             | 29,652         | (4,507,793)                | (212,025,115)                                   | (16,629,196,864)               |
|                             |             |         |                  |                           |               |                |                            |   |                                |

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|                             |              |                    |                            | All Plan                   | S                      |                          |                          |                            |                                |
|-----------------------------|--------------|--------------------|----------------------------|----------------------------|------------------------|--------------------------|--------------------------|----------------------------|--------------------------------|
|                             |              |                    |                            |                            |                        | _                        |                          | te Before Adjustments:     | Annual                         |
|                             |              |                    |                            |                            |                        |                          | F                        | 6.25%                      |                                |
| LTC Program Funded Rat      |              |                    | 98.33%                     |                            |                        |                          |                          | Projection Years 11+:      | 7.60%                          |
| Surplus/(Deficit) \$ = PV   |              |                    |                            | = Standard Program Defin   |                        |                          | Disco                    | ount Rate Adjustments:     | Scenario 6                     |
| Surplus/(Deficit) \$ as a P |              | miums):            | -1.61%                     | = Standard Program Defin   | ition                  |                          |                          |                            |                                |
| Fund Balance @ End of P     |              |                    | (3,697,803,896)            | 100.00%                    |                        | 100.00%                  |                          |                            |                                |
| Totals - 7/2011 thru 6/20   | 071:         |                    | 5,545,681,269              | 19,529,919,673             | 90,896,489             | 750,438,987              | (14,825,573,880)         | 7,850,985,162              |                                |
| As a % of Premiums:         |              |                    | 100.00%                    | 352.16%                    | 1.64%                  | 13.53%                   | -267.34%                 | 141.57%                    |                                |
| <b>-</b>                    |              |                    |                            |                            |                        | 040 574 705              | (0.000.575.00()          |                            |                                |
| Totals - Present Values:    |              |                    | 3,465,418,230              | 6,388,297,900              | 66,118,721             | 343,576,705              | (3,332,575,096)          | 4,050,571,390              |                                |
| As a % of PV(Premiums):     |              |                    | 100.00%                    | 184.34%                    | 1.91%                  | 9.91%                    | -96.17%                  | 116.89%                    |                                |
| Months                      | V            | 12                 | Total Boom Comm            | LTO D. ' LOL.'             | D. D. Ol. i            | T-1-1 F                  | Et.                      | to a star of Eastern       | F   D.                         |
| <u>Months</u>               | <u>Year</u>  | <u>Lives</u>       | Total Premiums             | LTC Paid Claims            | RoP Claims             | Total Expenses           | <u>Earnings</u>          | Investment Earnings        | Fund Balance                   |
| 7.10                        | 2011         | 152 200            | 1/2 214 005                | 0/ 510 3/0                 | 2 207 1/5              | 0.001./01                | (4 227 000               | 100 145 400                | 3,276,784,822                  |
| 7-12                        | 2011         | 152,290            | 163,214,995                | 86,518,260                 | 3,387,165              | 8,981,681                | 64,327,889               | 102,145,483                | 3,443,258,194                  |
| 1-12                        | 2012         | 147,709            | 319,059,141                | 189,064,343                | 6,895,002<br>7,167,348 | 18,148,098               | 104,951,698              | 201,455,397                | 3,749,665,289<br>4,000,857,206 |
| 1-12                        | 2013<br>2014 | 143,043<br>138,324 | 310,506,451<br>301,716,982 | 213,621,901                | 7,107,346              | 18,746,908               | 70,970,294               | 180,221,623                |                                |
| 1-12<br>1-12                | 2014         | 133,569            | 292,812,777                | 235,804,779<br>252,377,141 | 6,975,166              | 19,383,443<br>20,045,063 | 39,310,519<br>13,415,407 | 151,062,677<br>115,663,199 | 4,191,230,402<br>4,320,309,009 |
| 1-12                        | 2016         | 128,772            | 283,662,504                | 271,464,517                | 6,685,429              | 20,730,126               | (15,217,569)             | 75,622,588                 | 4,380,714,028                  |
| 1-12                        | 2017         | 123,912            | 274,128,945                | 291,313,450                | 6,346,259              | 21,274,336               | (44,805,099)             | 76,340,951                 | 4,412,249,880                  |
| 1-12                        | 2017         | 118,985            | 264,230,361                | 309,404,757                | 5,893,779              | 21,763,059               | (72,831,233)             | 120,465,127                | 4,459,883,774                  |
| 1-12                        | 2019         | 114,031            | 254,007,602                | 326,727,442                | 5,344,120              | 22,208,604               | (100,272,564)            | 165,561,531                | 4,525,172,742                  |
| 1-12                        | 2020         | 109,076            | 243,443,552                | 343,459,398                | 4,812,904              | 22,630,437               | (127,459,187)            | 212,152,736                | 4,609,866,290                  |
| 1-12                        | 2021         | 104,128            | 232,599,901                | 357,608,875                | 4,330,873              | 23,046,183               | (152,386,030)            | 291,147,971                | 4,748,628,232                  |
| 1-12                        | 2022         | 99,172             | 221,541,618                | 373,880,074                | 3,887,360              | 23,412,613               | (179,638,430)            | 354,834,294                | 4,923,824,096                  |
| 1-12                        | 2023         | 94,202             | 210,311,139                | 393,964,804                | 3,405,930              | 23,700,092               | (210,759,687)            | 366,973,304                | 5,080,037,714                  |
| 1-12                        | 2024         | 89,249             | 199,001,068                | 414,108,559                | 2,918,933              | 23,905,755               | (241,932,180)            | 377,651,061                | 5,215,756,594                  |
| 1-12                        | 2025         | 84,345             | 187,658,130                | 435,644,456                | 2,507,685              | 24,047,771               | (274,541,782)            | 386,737,283                | 5,327,952,096                  |
| 1-12                        | 2026         | 79,502             | 176,331,779                | 459,722,190                | 2,180,288              | 24,141,270               | (309,711,968)            | 393,935,764                | 5,412,175,891                  |
| 1-12                        | 2027         | 74,710             | 165,080,604                | 483,751,478                | 1,906,328              | 24,152,780               | (344,729,982)            | 398,988,459                | 5,466,434,368                  |
| 1-12                        | 2028         | 69,968             | 153,956,756                | 504,626,657                | 1,631,506              | 24,045,434               | (376,346,841)            | 401,876,694                | 5,491,964,221                  |
| 1-12                        | 2029         | 65,294             | 142,987,659                | 521,966,548                | 1,364,822              | 23,812,655               | (404,156,366)            | 402,729,145                | 5,490,537,000                  |
| 1-12                        | 2030         | 60,718             | 132,203,311                | 539,004,799                | 1,135,750              | 23,470,506               | (431,407,744)            | 401,580,314                | 5,460,709,570                  |
| 1-12                        | 2031         | 56,254             | 121,641,574                | 558,280,229                | 951,176                | 23,058,064               | (460,647,895)            | 398,214,211                | 5,398,275,886                  |
| 1-12                        | 2032         | 51,885             | 111,327,765                | 577,770,778                | 815,223                | 22,660,699               | (489,918,935)            | 392,321,014                | 5,300,677,965                  |
| 1-12                        | 2033         | 47,618             | 101,314,984                | 591,395,682                | 685,794                | 22,142,029               | (512,908,521)            | 383,978,107                | 5,171,747,551                  |
| 1-12                        | 2034         | 43,471             | 91,646,420                 | 599,727,318                | 556,720                | 21,476,888               | (530,114,506)            | 373,478,875                | 5,015,111,920                  |
| 1-12                        | 2035         | 39,474             | 82,340,290                 | 606,614,417                | 435,286                | 20,682,434               | (545,391,847)            | 360,977,455                | 4,830,697,528                  |
| 1-12                        | 2036         | 35,657             | 73,479,687                 | 614,058,683                | 337,397                | 19,792,076               | (560,708,468)            | 346,364,680                | 4,616,353,740                  |
| 1-12                        | 2037         | 32,030             | 65,124,492                 | 618,983,471                | 268,664                | 18,825,823               | (572,953,466)            | 329,562,649                | 4,372,962,924                  |
| 1-12                        | 2038         | 28,595             | 57,322,422                 | 615,518,913                | 214,154                | 17,781,528               | (576,192,173)            | 310,856,734                | 4,107,627,485                  |
| 1-12                        | 2039         | 25,365             | 50,086,087                 | 603,959,865                | 165,968                | 16,651,118               | (570,690,864)            | 290,834,759                | 3,827,771,380                  |
| 1-12                        | 2040         | 22,364             | 43,432,755                 | 589,474,789                | 123,600                | 15,462,962               | (561,628,596)            | 269,879,768                | 3,536,022,552                  |
| 1-12                        | 2041         | 19,607             | 37,389,850                 | 574,966,945                | 89,744                 | 14,265,872               | (551,932,712)            | 248,051,965                | 3,232,141,806                  |
| 1-12                        | 2042         | 17,091             | 31,962,611                 | 557,053,936                | 65,926                 | 13,093,630               | (538,250,881)            | 225,419,400                | 2,919,310,325                  |
| 1-12                        | 2043         | 14,806             | 27,134,548                 | 531,609,781                | 50,599                 | 11,943,747               | (516,469,579)            | 202,394,354                | 2,605,235,100                  |
| 1-12                        | 2044         | 12,745             | 22,874,351                 | 500,375,134                | 38,684                 | 10,805,046               | (488,344,513)            | 179,540,969                | 2,296,431,556                  |
| 1-12                        | 2045         | 10,905             | 19,145,498                 | 468,334,699                | 29,746                 | 9,693,356                | (458,912,303)            | 157,170,584                | 1,994,689,837                  |
| 1-12                        | 2046         | 9,279              | 15,914,975                 | 438,114,684                | 22,303                 | 8,636,619                | (430,858,631)            | 135,293,373                | 1,699,124,580                  |
| 1-12                        | 2047         | 7,851              | 13,138,654                 | 408,476,443                | 16,273                 | 7,654,212                | (403,008,274)            | 113,863,784                | 1,409,980,090                  |
| 1-12                        | 2048         | 6,605              | 10,774,947                 | 376,289,127                | 11,797                 | 6,753,998                | (372,279,974)            | 93,013,147                 | 1,130,713,263                  |
| 1-12                        | 2049         | 5,521              | 8,777,852                  | 342,413,795                | 8,319                  | 5,923,852                | (339,568,113)            | 73,006,360                 | 864,151,510                    |
| 1-12                        | 2050         | 4,584              | 7,098,066                  | 309,513,714                | 5,547                  | 5,157,676                | (307,578,872)            | 53,954,573                 | 610,527,211                    |
| 1-12                        | 2051         | 3,782              | 5,695,635                  | 279,384,459                | 3,549                  | 4,452,864                | (278,145,237)            | 35,799,416                 | 368,181,390                    |
| 1-12                        | 2052         | 3,100              | 4,533,153                  | 252,715,908                | 2,359                  | 3,814,271                | (251,999,384)            | 18,378,800                 | 134,560,806                    |
| 1-12                        | 2053         | 2,524              | 3,577,784                  | 226,780,559                | 1,467                  | 3,249,204                | (226,453,446)            | 1,576,021                  | (90,316,618)                   |
| 1-12                        | 2054         | 2,042              | 2,800,123                  | 200,575,200                | 833                    | 2,749,026                | (200,524,936)            | (14,543,823)               | (305,385,377)                  |
| 1-12                        | 2055         | 1,639              | 2,171,711                  | 175,529,878                | 385                    | 2,308,856                | (175,667,409)            | (29,946,867)               | (510,999,653)                  |
| 1-12                        | 2056         | 1,306              | 1,667,816                  | 152,646,166                | 89                     | 1,925,041                | (152,903,480)            | (44,706,049)               | (708,609,182)                  |
| 1-12                        | 2057         | 1,033              | 1,267,848                  | 132,205,250                | -                      | 1,592,690                | (132,530,092)            | (58,945,835)               | (900,085,108)                  |
| 1-12                        | 2058         | 811                | 953,971                    | 113,791,169                | -                      | 1,307,841                | (114,145,038)            | (72,798,105)               | (1,087,028,251)                |
| 1-12                        | 2059         | 633                | 710,557                    | 96,592,605                 | -                      | 1,065,999                | (96,948,047)             | (86,354,730)               | (1,270,331,029)                |
| 1-12                        | 2060         | 491                | 528,268                    | 81,007,025                 | -                      | 861,999                  | (81,340,757)             | (99,688,112)               | (1,451,359,898)                |
| 1-12                        | 2061         | 378                | 393,029                    | 67,534,843                 | -                      | 692,124                  | (67,833,938)             | (112,926,396)              | (1,632,120,232)                |
| 1-12                        | 2062         | 289                | 290,229                    | 56,060,128                 | -                      | 552,562                  | (56,322,462)             | (126,220,646)              | (1,814,663,340)                |
| 1-12                        | 2063         | 220                | 212,735                    | 46,332,471                 | -                      | 438,570                  | (46,558,306)             | (139,717,411)              | (2,000,939,057)                |
| 1-12                        | 2064         | 166                | 154,715                    | 38,160,569                 | -                      | 345,995                  | (38,351,849)             | (153,557,320)              | (2,192,848,225)                |
| 1-12                        | 2065         | 125                | 111,585                    | 31,339,195                 | -                      | 271,479                  | (31,499,089)             | (167,877,533)              | (2,392,224,848)                |
| 1-12                        | 2066         | 93                 | 79,863                     | 25,632,598                 | -                      | 211,790                  | (25,764,525)             | (182,808,621)              | (2,600,797,994)                |
| 1-12                        | 2067         | 69                 | 56,654                     | 20,924,166                 | -                      | 164,111                  | (21,031,622)             | (198,476,743)              | (2,820,306,359)                |
| 1-12                        | 2068         | 51                 | 39,726                     | 16,942,992                 | -                      | 126,538                  | (17,029,804)             | (215,005,458)              | (3,052,341,621)                |
| 1-12                        | 2069         | 37                 | 27,430                     | 13,560,292                 | -                      | 96,768                   | (13,629,631)             | (232,508,912)              | (3,298,480,164)                |
| 1-12                        | 2070         | 27                 | 18,592                     | 10,752,486                 | -                      | 73,166                   | (10,807,059)             | (251,106,063)              | (3,560,393,287)                |
| 1-6                         | 2071         | 23                 | 6,742                      | 4,484,883                  | -                      | 29,652                   | (4,507,793)              | (132,902,817)              | (3,697,803,896)                |
|                             |              |                    |                            |                            |                        |                          |                          |                            |                                |

## Attachment B(7) Intvestment Rate Decreased 3%

|                              |             |         |                   | All Plans                 | S           |                |                  |   |                  |
|------------------------------|-------------|---------|-------------------|---------------------------|-------------|----------------|------------------|---|------------------|
|                              |             |         |                   |                           |             | _              |                  | te Before Adjustments: Projection Years 1 - 10: | Annual           |
|                              |             |         |                   |                           |             |                | F                | 6.25%   |                  |
| LTC Program Funded Rati      |             |         | 64.08%            |                           |             |                |                  | Projection Years 11+:                           | 7.60%            |
| Surplus/(Deficit) \$ = PV    |             |         |                   | = Standard Program Defini |             |                | Disco            | ount Rate Adjustments:                          | Scenario 7       |
| Surplus/(Deficit) \$ as a Pe |             | miums): | -47.87%           | = Standard Program Defini | ition       |                |                  |   |                  |
| Fund Balance @ End of P      |             |         | (24,088,342,900)  | 100.00%                   |             | 100.00%        |                  |   |                  |
| Totals - 7/2011 thru 6/20    | 71:         |         | 5,545,681,269     | 19,529,919,673            | 90,896,489  | 750,438,987    | (14,825,573,880) | (12,539,553,842)                                |                  |
| As a % of Premiums:          |             |         | 100.00%           | 352.16%                   | 1.64%       | 13.53%         | -267.34%         | -226.11%  |                  |
|                              |             |         |                   |                           |             |                | (5.440.500.400)  |   |                  |
| Totals - Present Values:     |             |         | 3,836,906,603     | 8,467,528,091             | 70,630,492  | 412,346,141    | (5,113,598,122)  | 298,377,906                                     |                  |
| As a % of PV(Premiums):      |             |         | 100.00%           | 220.69%                   | 1.84%       | 10.75%         | -133.27%         | 7.78%   |                  |
| Months                       | <u>Year</u> | Lives   | Total Premiums    | LTC Paid Claims           | RoP Claims  | Total Expenses | <u>Earnings</u>  | Investment Earnings                             | Fund Balance     |
| <u>Months</u>                | <u>real</u> | Lives   | TOTAL PLEITINITIS | LTC Palu Ciailis          | ROP CIAITIS | TOTAL EXPENSES | Editiligs        | IIIVestillerit Earnings                         | 3,276,784,822    |
| 7-12                         | 2011        | 152,290 | 163,214,995       | 86,518,260                | 3,387,165   | 8,981,681      | 64,327,889       | 53,503,070                                      | 3,394,615,780    |
| 1-12                         | 2012        | 147,709 | 319,059,141       | 189,064,343               | 6,895,002   | 18,148,098     | 104,951,698      | 112,387,570                                     | 3,611,955,049    |
| 1-12                         | 2013        | 143,043 | 310,506,451       | 213,621,901               | 7,167,348   | 18,746,908     | 70,970,294       | 118,927,131                                     | 3,801,852,474    |
| 1-12                         | 2014        | 138,324 | 301,716,982       | 235,804,779               | 7,218,240   | 19,383,443     | 39,310,519       | 124,537,896                                     | 3,965,700,890    |
| 1-12                         | 2014        |         |                   |                           |             | 20,045,063     |                  |   | 4,108,559,738    |
|                              |             | 133,569 | 292,812,777       | 252,377,141               | 6,975,166   |                | 13,415,407       | 129,443,441                                     |                  |
| 1-12                         | 2016        | 128,772 | 283,662,504       | 271,464,517               | 6,685,429   | 20,730,126     | (15,217,569)     | 133,625,179                                     | 4,226,967,348    |
| 1-12                         | 2017        | 123,912 | 274,128,945       | 291,313,450               | 6,346,259   | 21,274,336     | (44,805,099)     | 136,982,895                                     | 4,319,145,144    |
| 1-12                         | 2018        | 118,985 | 264,230,361       | 309,404,757               | 5,893,779   | 21,763,059     | (72,831,233)     | 139,511,531                                     | 4,385,825,441    |
| 1-12                         | 2019        | 114,031 | 254,007,602       | 326,727,442               | 5,344,120   | 22,208,604     | (100,272,564)    | 141,230,743                                     | 4,426,783,620    |
| 1-12                         | 2020        | 109,076 | 243,443,552       | 343,459,398               | 4,812,904   | 22,630,437     | (127,459,187)    | 142,097,300                                     | 4,441,421,733    |
| 1-12                         | 2021        | 104,128 | 232,599,901       | 357,608,875               | 4,330,873   | 23,046,183     | (152,386,030)    | 171,334,921                                     | 4,460,370,624    |
| 1-12                         | 2022        | 99,172  | 221,541,618       | 373,880,074               | 3,887,360   | 23,412,613     | (179,638,430)    | 201,489,149                                     | 4,482,221,344    |
| 1-12                         | 2023        | 94,202  | 210,311,139       | 393,964,804               | 3,405,930   | 23,700,092     | (210,759,687)    | 201,779,210                                     | 4,473,240,867    |
| 1-12                         | 2024        | 89,249  | 199,001,068       | 414,108,559               | 2,918,933   | 23,905,755     | (241,932,180)    | 200,639,768                                     | 4,431,948,454    |
| 1-12                         | 2025        | 84,345  | 187,658,130       | 435,644,456               | 2,507,685   | 24,047,771     | (274,541,782)    | 197,993,280                                     | 4,355,399,952    |
| 1-12                         | 2026        | 79,502  | 176,331,779       | 459,722,190               | 2,180,288   | 24,141,270     | (309,711,968)    | 193,664,227                                     | 4,239,352,211    |
| 1-12                         | 2027        | 74,710  | 165,080,604       | 483,751,478               | 1,906,328   | 24,152,780     | (344,729,982)    | 187,506,159                                     | 4,082,128,388    |
| 1-12                         |             | 69,968  |                   |                           |             | 24,045,434     | (376,346,841)    | 179,522,702                                     |                  |
|                              | 2028        |         | 153,956,756       | 504,626,657               | 1,631,506   |                |                  |   | 3,885,304,248    |
| 1-12                         | 2029        | 65,294  | 142,987,659       | 521,966,548               | 1,364,822   | 23,812,655     | (404,156,366)    | 169,807,377                                     | 3,650,955,259    |
| 1-12                         | 2030        | 60,718  | 132,203,311       | 539,004,799               | 1,135,750   | 23,470,506     | (431,407,744)    | 158,394,690                                     | 3,377,942,205    |
| 1-12                         | 2031        | 56,254  | 121,641,574       | 558,280,229               | 951,176     | 23,058,064     | (460,647,895)    | 145,167,627                                     | 3,062,461,937    |
| 1-12                         | 2032        | 51,885  | 111,327,765       | 577,770,778               | 815,223     | 22,660,699     | (489,918,935)    | 129,957,364                                     | 2,702,500,366    |
| 1-12                         | 2033        | 47,618  | 101,314,984       | 591,395,682               | 685,794     | 22,142,029     | (512,908,521)    | 112,836,500                                     | 2,302,428,345    |
| 1-12                         | 2034        | 43,471  | 91,646,420        | 599,727,318               | 556,720     | 21,476,888     | (530,114,506)    | 94,007,335                                      | 1,866,321,174    |
| 1-12                         | 2035        | 39,474  | 82,340,290        | 606,614,417               | 435,286     | 20,682,434     | (545,391,847)    | 73,583,344                                      | 1,394,512,670    |
| 1-12                         | 2036        | 35,657  | 73,479,687        | 614,058,683               | 337,397     | 19,792,076     | (560,708,468)    | 51,516,978                                      | 885,321,180      |
| 1-12                         | 2037        | 32,030  | 65,124,492        | 618,983,471               | 268,664     | 18,825,823     | (572,953,466)    | 27,782,999                                      | 340,150,714      |
| 1-12                         | 2038        | 28,595  | 57,322,422        | 615,518,913               | 214,154     | 17,781,528     | (576,192,173)    | 2,578,782                                       | (233,462,678)    |
| 1-12                         | 2039        | 25,365  | 50,086,087        | 603,959,865               | 165,968     | 16,651,118     | (570,690,864)    | (23,719,973)                                    | (827,873,515)    |
| 1-12                         | 2040        | 22,364  | 43,432,755        | 589,474,789               | 123,600     | 15,462,962     | (561,628,596)    | (50,871,803)                                    | (1,440,373,914)  |
| 1-12                         | 2041        | 19,607  | 37,389,850        | 574,966,945               | 89,744      | 14,265,872     | (551,932,712)    | (78,836,909)                                    | (2,071,143,534)  |
| 1-12                         | 2042        | 17,007  | 31,962,611        | 557,053,936               | 65,926      | 13,093,630     | (538,250,881)    | (107,570,993)                                   | (2,716,965,408)  |
| 1-12                         | 2042        | 14,806  | 27,134,548        | 531,609,781               | 50,599      | 11,943,747     | (516,469,579)    | (136,822,417)                                   | (3,370,257,404)  |
| 1-12                         | 2043        | 12,745  | 22,874,351        |                           | 38,684      | 10,805,046     |                  | (166,255,669)                                   |                  |
|                              |             |         |                   | 500,375,134               |             |                | (488,344,513)    |   | (4,024,857,586)  |
| 1-12                         | 2045        | 10,905  | 19,145,498        | 468,334,699               | 29,746      | 9,693,356      | (458,912,303)    | (195,699,117)                                   | (4,679,469,006)  |
| 1-12                         | 2046        | 9,279   | 15,914,975        | 438,114,684               | 22,303      | 8,636,619      | (430,858,631)    | (225,169,579)                                   | (5,335,497,215)  |
| 1-12                         | 2047        | 7,851   | 13,138,654        | 408,476,443               | 16,273      | 7,654,212      | (403,008,274)    | (254,718,425)                                   | (5,993,223,914)  |
| 1-12                         | 2048        | 6,605   | 10,774,947        | 376,289,127               | 11,797      | 6,753,998      | (372,279,974)    | (284,290,020)                                   | (6,649,793,908)  |
| 1-12                         | 2049        | 5,521   | 8,777,852         | 342,413,795               | 8,319       | 5,923,852      | (339,568,113)    | (313,751,813)                                   | (7,303,113,834)  |
| 1-12                         | 2050        | 4,584   | 7,098,066         | 309,513,714               | 5,547       | 5,157,676      | (307,578,872)    | (343,070,590)                                   | (7,953,763,295)  |
| 1-12                         | 2051        | 3,782   | 5,695,635         | 279,384,459               | 3,549       | 4,452,864      | (278,145,237)    | (372,319,227)                                   | (8,604,227,759)  |
| 1-12                         | 2052        | 3,100   | 4,533,153         | 252,715,908               | 2,359       | 3,814,271      | (251,999,384)    | (401,633,933)                                   | (9,257,861,076)  |
| 1-12                         | 2053        | 2,524   | 3,577,784         | 226,780,559               | 1,467       | 3,249,204      | (226,453,446)    | (431,121,873)                                   | (9,915,436,395)  |
| 1-12                         | 2054        | 2,042   | 2,800,123         | 200,575,200               | 833         | 2,749,026      | (200,524,936)    | (460,779,931)                                   | (10,576,741,262) |
| 1-12                         | 2055        | 1,639   | 2,171,711         | 175,529,878               | 385         | 2,308,856      | (175,667,409)    | (490,627,011)                                   | (11,243,035,682) |
| 1-12                         | 2056        | 1,306   | 1,667,816         | 152,646,166               | 89          | 1,925,041      | (152,903,480)    | (520,749,036)                                   | (11,916,688,198) |
| 1-12                         | 2057        | 1,033   | 1,267,848         | 132,205,250               | -           | 1,592,690      | (132,530,092)    | (551,263,640)                                   | (12,600,481,929) |
| 1-12                         | 2058        | 811     | 953,971           | 113,791,169               |             | 1,307,841      | (114,145,038)    | (582,292,550)                                   | (13,296,919,518) |
|                              | 2059        |         |                   |                           |             |                |                  |   |                  |
| 1-12                         |             | 633     | 710,557           | 96,592,605                | -           | 1,065,999      | (96,948,047)     | (613,932,768)                                   | (14,007,800,333) |
| 1-12                         | 2060        | 491     | 528,268           | 81,007,025                | -           | 861,999        | (81,340,757)     | (646,269,882)                                   | (14,735,410,972) |
| 1-12                         | 2061        | 378     | 393,029           | 67,534,843                | -           | 692,124        | (67,833,938)     | (679,423,836)                                   | (15,482,668,746) |
| 1-12                         | 2062        | 289     | 290,229           | 56,060,128                | -           | 552,562        | (56,322,462)     | (713,527,999)                                   | (16,252,519,207) |
| 1-12                         | 2063        | 220     | 212,735           | 46,332,471                | -           | 438,570        | (46,558,306)     | (748,712,181)                                   | (17,047,789,693) |
| 1-12                         | 2064        | 166     | 154,715           | 38,160,569                | -           | 345,995        | (38,351,849)     | (785,101,844)                                   | (17,871,243,386) |
| 1-12                         | 2065        | 125     | 111,585           | 31,339,195                | -           | 271,479        | (31,499,089)     | (822,819,653)                                   | (18,725,562,128) |
| 1-12                         | 2066        | 93      | 79,863            | 25,632,598                | -           | 211,790        | (25,764,525)     | (861,983,610)                                   | (19,613,310,263) |
| 1-12                         | 2067        | 69      | 56,654            | 20,924,166                | -           | 164,111        | (21,031,622)     | (902,708,488)                                   | (20,537,050,373) |
| 1-12                         | 2068        | 51      | 39,726            | 16,942,992                | -           | 126,538        | (17,029,804)     | (945,106,940)                                   | (21,499,187,117) |
| 1-12                         | 2069        | 37      | 27,430            | 13,560,292                | -           | 96,768         | (13,629,631)     | (989,285,437)                                   | (22,502,102,185) |
| 1-12                         | 2070        | 27      | 18,592            | 10,752,486                | -           | 73,166         | (10,807,059)     | (1,035,353,025)                                 | (23,548,262,268) |
| 1-6                          | 2071        | 23      | 6,742             | 4,484,883                 | _           | 29,652         | (4,507,793)      | (535,572,839)                                   | (24,088,342,900) |
| -                            | ==::        |         | -,- 1-            | .,,                       |             |                | (11-70)          | (/)   | ,                |

# **Attachment C**

#### Attachment C

### Long-Term Care Model(s) and Assumptions

#### A. Model(s)

Projection results are based on a projection of 154,634 inforce members as of 6/30/11 from business issued through 6/30/11. CalPERS LTC business consists of facility-only and comprehensive coverages and includes a variety of elimination period/benefit period/inflation coverage combinations. A summary of the model cells we used for projection purposes has been included as Attachment E.

Please note that we combined member information for each potential model cell for which there were few inforce members into a projection model cell with the most similar benefit design.

Projection results for each cell reflect output from three different models. The first model generates base plan projections, the second generates premium waiver projections, and the third generates return-of-premium benefit projections. Given that the first two models are built from the same model chassis and the relative insignificance of waiver-of-premium and return-of-premium benefits as compared to base plan benefits, the remainder of this attachment will focus on the base plan benefit model. Please note that the assumptions used for the latter two models are consistent with those used in the corresponding base plan projections.

#### B. Inforce Members as of 6/30/11 - Distributions of Business

The following distributions for all inforce members as of 6/30/11 are included in Attachment F:

- o By benefit period and elimination period
- o By issue-age and attained-age
- o By coverage
- o By inflation option
- o By gender
- o By marital status
- o By premium mode
- o By underwriting type
- o By product series

Please let us know if you would like to see additional distributions relating to the 6/30/11 inforce business.

### C. Assumptions

Please note that detailed assumption printouts can be readily generated from each model for every model cell. The following subsections discuss additional information regarding

the various assumptions used and include summaries of assumptions used throughout all of the model cells.

### 1. Morbidity

The CalPERS underlying morbidity experience continues to develop, and we continuously review and revise our approaches to take into account the best data/information available to us.

From a modeling standpoint, the following morbidity assumptions were used:

*Ultimate Claim Costs* - These vary by benefit design, gender and attained age, and were developed as described below.

*Selection Factors* – Experience selection factors were developed as described below and vary by issue-age band, duration, issue era, and underwriting type. The manual selection factors vary by issue-age band, duration, and underwriting type, and are identical to those assumed in the 2010 Annual Valuation.

Morbidity Selection Factors and Ultimate Claim Cost Development and Modeling - Summary: For the benefit designs modeled, we performed detailed select-and-ultimate claim cost analyses and adjusted assumed select-and-ultimate claim costs based on the results of those analyses.

#### a. Experience Studies

We updated the experience report comparing actual select-and-ultimate Program claim costs to expected select-and-ultimate claim costs where the expected claim costs were based on the Univita manual assumptions. Because of the level of detail included in the study, claims with an incurred date from 7/1/10 through 6/30/11 were excluded (i.e., those within twelve months of the valuation date). These claims were excluded because over a third of the total number of claims incurred within a given year are not reported or do not receive payments as of the end of that year, and an allocation of these estimated unreported claims could have distorted the results of our study. For all incurred claims included in this study, we used updated payment data through 6/30/11 and claim reserves estimated as of 6/30/11.

### b. Claim Cost Development

We used the following approach with respect to our select-and-ultimate claim cost analyses:

 Using source coverage and claims data files from Univita and given relevant direction from Univita actuarial personnel regarding the interpretation and processing of that data, we developed complete inception-to-date exposure and claims databases for the Program.

- We added provision for claim reserves and incurred but not reported (IBNR) claim liabilities. The former were added on a seriatim basis, while the latter were allocated across inforce policies not on claim as of the valuation date based on annualized premiums (to the individual cell level).
- O The experience report in item a. above continued to confirm that incurred claim experience varies by underwriting type and when a given policy was issued. Using the results of the study and consistent with the 2010 Annual Valuation, select-and-ultimate factors were created to modify the Univita manual selection factors. The result of this step is a set of experience select-and-ultimate factors that vary by calendar year of issue and underwriting type. While these select-and-ultimate factors were developed from actual experience, industry selection wear-off patterns were also considered when determining the lengths of the selection periods as well as the ultimate selection factors for each issue-age band.
- We used the experience select-and-ultimate factors created in the previous step as "gross-up factors" that were used to adjust incurred claims for earlier durations to estimated ultimate levels.
- o All incurred claims were grossed up as indicated above.
- We developed a summary of estimated ultimate incurred claim costs by attained-age band and gender for the benefit designs we explicitly modeled.

#### c. Modeling

The estimated actual ultimate male and female claim costs for pivotal ages 47, 57, 62, 67, 72, 77, 82 and 87 were adjusted such that they were on the same basis as Univita manual ultimate claim costs. The experience ultimate claim costs between the pivotal ages were developed using standard interpolation methods. Corresponding claim costs for attained-ages 37 and younger and 97 and older were set at Univita's manual ultimate claim costs. Claim costs between 37 and 47 and between 87 and 97 were developed using standard interpolation methods.

In order to validate the experience claim costs, an actual-to-expected claim cost experience study was created using the recently created experience select-and-ultimate claim costs as the expected table. In our opinion, the assumptions we used reasonably reproduce historical experience.

The resulting adjusted claim costs combined with the select-and-ultimate factors were credibility-weighted with the corresponding Univita manual select-and-ultimate claim costs to develop the assumed claim costs.

## d. Additional Information Applicable to the Development of Morbidity Assumptions

As a reminder, we chose to utilize the associated manual morbidity assumptions utilized when we started our initial valuation in 2005 as a basis for assumed valuation morbidity as opposed to our own LTC claims database for the following reasons:

- o The manual better reflected experience for the LTC insurance industry as a whole:
- It required relatively few adjustments before it could be utilized for this purpose; and,
- o Relevant values had already been developed for prior valuation work and were readily available.

The credibility standards we applied were taken from the results of an analysis dated 5/28/03 performed by the Credibility Subgroup of the American Academy of Actuaries Long-Term Care Reserving Work Group. For credibility-weighting purposes, we considered "full credibility" to mean that there would be a 90% probability that estimates would fall within 10% of expected claim costs, and we used appropriate Program data to develop the minimum claim count needed for each cell in order to ascribe full credibility to the actual experience associated with that cell. We ascribed partial credibility for a given cell based on the relationship between actual claim counts and "full credibility" claim counts; however, any actual claim volume that resulted in less than a 20% credibility-weighting to actual experience was ignored entirely.

Claim Payment Distributions – These vary by age at claim incurral, gender, plan, benefit period, and claim duration. They were updated for this valuation to reflect emerging experience and were developed to be consistent with current liability/reserve levels.

**Morbidity Improvement** – Consistent with population experience and relevant actuarial documentation and practice, we assumed that future morbidity would improve by 1% per year for 20 years from the valuation date. We also made a corresponding mortality improvement assumption.

*Inflation Adjustment* – Appropriate morbidity adjustments are made for policies with inflation protection.

Adjustments to Reflect Individuals Already on Claim – These vary by benefit period, inflation coverage, gender, issue age and duration. They are used to adjust the assumed claim costs to be on an exposure basis consistent with that used in the projection model.

### 2. Policy Terminations

The following description is a summary of the process we utilized in the 2009 valuation to determine the appropriate mortality assumption. For the 2011 valuation, we assumed the same mortality assumption and confirmed and updated the lapse assumption utilizing the additional year of total termination experience available.

2009 Valuation Mortality Development - Generally, deaths are not consistently reported in LTC insurance, and therefore it is customary to compare the historical inforce file to a Social Security Database to properly identifying those that have died rather than those that have lapsed coverage. Accurate mortality assumptions are important when projecting future terminations within a LTC block because as the block ages the mortality becomes a greater proportion of total terminations.

Using the November 2008 Social Security Database, we identified deaths within the CalPERS LTC Program by matching social security numbers, names, and birthdates. In total, over 17,000 deaths were confirmed or identified through this process. Any inconsistencies such as those reported as deaths in the Social Security Database but still active in the CalPERS Program were reported to the Univita.

Using the identified deaths, we compared the actual mortality experience to what was expected using last year's valuation assumptions. Overall, the previous assumptions were reasonable, but we identified several refinements. In addition, members that were on claim had mortality rates that were, on average, two to three times higher than those that were not claim. Because of the significant difference between these two cohorts, we further developed two separate mortality assumptions; one for members not on claim, and one for those on claim. The development of these assumptions is discussed next.

#### a. Mortality assumptions for members not on claim

The CalPERS LTC Program mortality experience for members not on claim indicates that initially after a member enters the Program, the mortality is lower and this lower mortality extends out further than previously assumed. As a result, the revised mortality selection factors were reduced and extended out to ten years. These new selection factors are included shown below.

In addition to modifying the selection factors, attained age adjustment factors were developed and refined to a level that when they were combined with the new selection factors, the expected deaths for members not on claim equaled the actual deaths.

#### b. Mortality assumptions for members on claim

Applying the above mortality assumptions developed for members not on claim to those on claim resulted in actual deaths being 2.5 times higher than expected in the aggregate. Further refining this comparison, the younger members on claim had much higher mortality than members of the same age group that were not on claim. Older members on claim also had higher actual deaths than expected but

not nearly as high as the younger members. As a result, additional attained age factors were developed to increase expected mortality for members on claim. These additional factors were developed and refined to a level that produced an expected number of deaths equal to that of the actual level for members on claim.

### c. Assumed mortality

The following were used for all projection cells as the assumed mortality:

- o 1994 GAM table along with 100% of projection scale AA used for the next twenty years.
- Selection factors by policy year as follows:

Policy Year 1: 0.33 Policy Year 2: 0.42Policy Year 3: 0.50 Policy Year 4: 0.56 Policy Year 5: 0.57 Policy Year 6: 0.60 Policy Year 7: 0.65 Policy Year 8: 0.70 Policy Year 9: 0.71 0.71 Policy Year 10+:

• We used the same attained-age adjustment factors as were used in the 2009 and 2010 Annual Valuations.

Resetting the Assumed Lapse Assumptions - Using actual total termination experience and the 2008 mortality assumptions, the lapse assumptions were developed. Regarding the analysis performed, we started with the actual total termination experience including both voluntary lapses and deaths, and we then backed out the revised assumed mortality to review actual voluntary lapse rates. The revised lapse assumptions were then developed to correspond to the observed actual lapses.

In resetting the lapse assumptions, we closely reviewed termination experience from 7/09 and 6/11 because of the potential for increased lapses due to the current economic conditions and announcements related to premium rate increases.

#### a. Impact to the projected results from the above lapse changes

The impact from the updated lapse assumptions is summarized in the "Reconciliation of Base Case Valuation Results - 2010 to 2011" section.

### **b.** Voluntary Lapse Rates

The following assumed voluntary lapse rates were used for all projection cells:

| Age     |      | Policy Year |      |      |      |      |      |      |      |      |      |  |
|---------|------|-------------|------|------|------|------|------|------|------|------|------|--|
| Group   | 1    | 2           | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11+  |  |
| < 40    | 4.7% | 3.6%        | 3.4% | 2.6% | 2.6% | 2.6% | 2.5% | 2.4% | 2.0% | 1.9% | 1.9% |  |
| 40 - 49 | 3.3% | 2.3%        | 1.9% | 1.7% | 1.6% | 1.4% | 1.3% | 1.3% | 1.1% | 0.9% | 0.9% |  |
| 50 - 59 | 2.7% | 1.8%        | 1.4% | 1.1% | 1.1% | 0.9% | 0.9% | 0.7% | 0.5% | 0.4% | 0.4% |  |
| 60 - 69 | 2.0% | 1.2%        | 0.9% | 0.7% | 0.6% | 0.6% | 0.5% | 0.5% | 0.4% | 0.4% | 0.4% |  |
| 70 - 79 | 2.0% | 0.9%        | 0.7% | 0.7% | 0.7% | 0.7% | 0.7% | 0.7% | 0.7% | 0.7% | 0.7% |  |
| 80 +    | 2.3% | 2.0%        | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% |  |

In addition, lapse rates were increased to reflect claimants that exhaust limited benefit periods.

#### 3. Expenses

We used the following expense assumptions:

- We received an update to Univita's contracted expense costs for fixed and per member fees. These expense fees are effective through 2012, and we assumed the factors were increased by an inflation rate of 3% starting in 2013.
- We assumed CalPERS operational expenses would be \$68,471 per month through January of 2012 and increase 3% for inflation each February thereafter.
- Starting in February 2017, we reduced the inflated fixed dollar fees by the ratio of current premium to the prior year premium. The intent of this is to adjust for the fact that if the Program volume declines, expenses would need to decline as well.
- We converted Univita claim adjudication fees to 3.74% of incurred claims and increased these by 3% each year for inflation.

#### 4. Discount Rate

As discussed in the report regarding discount rates, we assumed 6.25% for projection years 1-10, and 7.60% for projection years 11+.

## 5. Assumptions Relating to the Implementation of Ongoing Premium Rate Increases

Consistent with the assumptions relating to the development of the recommended rate increases in December 2009, we continue to assume conversions, shock lapses, and anti-selection associated the ongoing rate increases.

# **Attachment D**

### **Attachment D**

### **CalPERS LTC Program**

Comparison of Actual and Projected Results For 7/2010 thru 6/2011

| Actual Fund Balance as of 6/30/10:   | 6/30/2010 Valuation Projection Results 2,609,672,826 | Actual Results<br>2,609,672,826 | Actual Less Expected Dollar Differences | Actual/Expected<br>Percentage<br><u>Differences</u> |
|--|--|---------------------------------|---|---|
| Cash Flows from 7/2010 thru 6/2011   |  |                                 |   |   |
| Premiums   | 330,048,078  | 315,776,762                     | (14,271,316)                            | -4.32%  |
| Investment Income  | 171,595,689  | 537,156,718                     | 365,561,029                             | 213.04%   |
| Paid Claims  | 154,506,270  | 156,117,839                     | 1,611,569                               | 1.04%   |
| Expenses   | 17,954,468   | 21,303,862                      | 3,349,394                               | 18.65%  |
| Prior Year Adjustments   |  | 1,677,352                       |   |   |
| Change in "Other Program Liabilities"  |  | 6,551,538                       |   |   |
| Estimated Fund Balance as of 6/30/11: (Calculated from Values Above)                         | 2,938,855,855  | 3,276,955,715                   | 338,099,860                             | 11.50%  |
| Actual Fund Balance as of 6/30/11:   | 3,276,784,822  | 3,276,784,822                   |   |   |
| Estimated vs. Actual - Dollar Differences:<br>Estimated vs. Actual - Percentage Differences: | (337,928,966)<br>-10.31%                             | 170,893<br>0.01%                | 338,099,860                             |   |

# **Attachment E**

## CalPERS LTC Program Summary of Model Cells Included in 6/30/2011 Projection

|                           |  |              | Annualized         |
|---------------------------|--|--------------|--------------------|
| Cell Name                 | Cell Description  Comprehensive, 3 Yr BP, 90 Day EP, No Inflation, 50% HHC, 50% ALF, LF U/W  | <u>Count</u> | Premium            |
| LTC1_C3_LF                |  | 4,975        | 9,380,111          |
| LTC1_C3_MGI               | Comprehensive, 3 Yr BP, 90 Day EP, No Inflation, 50% HHC, 50% ALF, MGI U/W Comprehensive, 3 Yr BP, 90 Day EP, No Inflation, 50% HHC, 50% ALF, SF U/W                                     | 1,213        | 1,225,615          |
| LTC1_C3_SF                |  | 955          | 969,249            |
| LTC1_C3i_LF               | Comprehensive, 3 Yr BP, 90 Day EP, Inflation, 50% HHC, 50% ALF, LF U/W Comprehensive, 3 Yr BP, 90 Day EP, Inflation, 50% HHC, 50% ALF, MGI U/W   | 6,329        | 13,323,168         |
| LTC1_C3i_MGI              |  | 1,668        | 2,404,185          |
| LTC1_C3i_SF               | Comprehensive, 3 Yr BP, 90 Day EP, Inflation, 50% HHC, 50% ALF, SF U/W   | 1,544        | 2,352,739          |
| LTC1_C6_LF                | Comprehensive, 6 Yr BP, 90 Day EP, No Inflation, 50% HHC, 50% ALF, LF U/W Comprehensive, 6 Yr BP, 90 Day EP, No Inflation, 50% HHC, 50% ALF, MGI U/W                                     | 752          | 1,372,371          |
| LTC1_C6_MGI               |  | 268          | 253,836            |
| LTC1_C6_SF                | Comprehensive, 6 Yr BP, 90 Day EP, No Inflation, 50% HHC, 50% ALF, SF U/W Comprehensive, 6 Yr BP, 90 Day EP, Inflation, 50% HHC, 50% ALF, LF U/W   | 187          | 196,321            |
| LTC1_C6i_LF               |  | 1,983        | 5,009,542          |
| LTC1_C6i_MGI              | Comprehensive, 6 Yr BP, 90 Day EP, Inflation, 50% HHC, 50% ALF, MGI U/W Comprehensive, 6 Yr BP, 90 Day EP, Inflation, 50% HHC, 50% ALF, SF U/W   | 655          | 1,199,809          |
| LTC1_C6i_SF               |  | 640          | 1,253,064          |
| LTC1_CL_LF                | Comprehensive, Lifetime BP, 90 Day EP, No Inflation, 50% HHC, 50% ALF, LF U/W  | 7,508        | 19,149,601         |
| LTC1_CL_MGI               | Comprehensive, Lifetime BP, 90 Day EP, No Inflation, 50% HHC, 50% ALF, MGI U/W Comprehensive, Lifetime BP, 90 Day EP, No Inflation, 50% HHC, 50% ALF, SF U/W                             | 4,519        | 6,541,380          |
| LTC1_CL_SF                |  | 3,167        | 4,561,959          |
| LTC1_CLi_LF               | Comprehensive, Lifetime BP, 90 Day EP, Inflation, 50% HHC, 50% ALF, LF U/W Comprehensive, Lifetime BP, 90 Day EP, Inflation, 50% HHC, 50% ALF, MGI U/W                                   | 29,595       | 84,754,157         |
| LTC1_CLi_MGI              |  | 16,519       | 34,164,776         |
| LTC1_CLi_SF               | Comprehensive, Lifetime BP, 90 Day EP, Inflation, 50% HHC, 50% ALF, SF U/W Facilities Only, 3 Yr BP, 90 Day EP, No Inflation, 50% ALF, LF U/W  | 13,014       | 28,534,767         |
| LTC1_N3_LF                |  | 3,286        | 4,566,344          |
| LTC1_N3_MGI               | Facilities Only, 3 Yr BP, 90 Day EP, No Inflation, 50% ALF, MGI U/W  | 442          | 342,367            |
| LTC1_N3_SF                | Facilities Only, 3 Yr BP, 90 Day EP, No Inflation, 50% ALF, SF U/W Facilities Only, 3 Yr BP, 90 Day EP, Inflation, 50% ALF, LF U/W   | 341          | 277,059            |
| LTC1_N3i_LF               |  | 3,197        | 5,580,168          |
| LTC1_N3i_MGI              | Facilities Only, 3 Yr BP, 90 Day EP, Inflation, 50% ALF, MGI U/W Facilities Only, 3 Yr BP, 90 Day EP, Inflation, 50% ALF, SF U/W   | 683          | 764,578            |
| LTC1_N3i_SF               |  | 742          | 914,903            |
| LTC1_N6_LF                | Facilities Only, 6 Yr BP, 90 Day EP, No Inflation, 50% ALF, LF U/W   | 606          | 916,126            |
| LTC1_N6_MGI               | Facilities Only, 6 Yr BP, 90 Day EP, No Inflation, 50% ALF, MGI U/W  | 53           | 49,065             |
| LTC1_N6_SF                | Facilities Only, 6 Yr BP, 90 Day EP, No Inflation, 50% ALF, SF U/W   | 65           | 66,842             |
| LTC1_N6i_LF               | Facilities Only, 6 Yr BP, 90 Day EP, Inflation, 50% ALF, LF U/W Facilities Only, 6 Yr BP, 90 Day EP, Inflation, 50% ALF, MGI U/W   | 692          | 1,586,171          |
| LTC1_N6i_MGI              |  | 132          | 208,614            |
| LTC1_N6i_SF               | Facilities Only, 6 Yr BP, 90 Day EP, Inflation, 50% ALF, SF U/W Facilities Only, Lifetime BP, 90 Day EP, No Inflation, 50% ALF, LF U/W   | 156          | 265,875            |
| LTC1_NL_LF                |  | 3,437        | 7,163,483          |
| LTC1_NL_MGI               | Facilities Only, Lifetime BP, 90 Day EP, No Inflation, 50% ALF, MGI U/W  | 602          | 694,052            |
| LTC1_NL_SF                | Facilities Only, Lifetime BP, 90 Day EP, No Inflation, 50% ALF, SF U/W Facilities Only, Lifetime BP, 90 Day EP, Inflation, 50% ALF, LF U/W   | 596          | 703,577            |
| LTC1_NLi_LF               |  | 8,391        | 20,713,962         |
| LTC1_NLi_MGI              | Facilities Only, Lifetime BP, 90 Day EP, Inflation, 50% ALF, MGI U/W Facilities Only, Lifetime BP, 90 Day EP, Inflation, 50% ALF, SF U/W   | 2,101        | 3,476,836          |
| LTC1_NLi_SF               |  | 2,350        | 4,037,021          |
| LTC1_P1_LF                | Partnership, 1 Yr BP, 30 Day EP, Inflation, 50% HHC, 50% ALF, LF U/W Partnership, 1 Yr BP, 30 Day EP, Inflation, 50% HHC, 50% ALF, MGI U/W   | 1,503        | 2,001,584          |
| LTC1_P1_MGI               |  | 334          | 254,017            |
| LTC1_P1_SF                | Partnership, 1 Yr BP, 30 Day EP, Inflation, 50% HHC, 50% ALF, SF U/W   | 286          | 209,349            |
| LTC1_P2_LF                | Partnership, 2 Yr BP, 30 Day EP, Inflation, 50% HHC, 50% ALF, LF U/W Partnership, 2 Yr BP, 30 Day EP, Inflation, 50% HHC, 50% ALF, MGI U/W   | 2,213        | 4,326,510          |
| LTC1_P2_MGI               |  | 576          | 686,412            |
| LTC1_P2_SF                | Partnership, 2 Yr BP, 30 Day EP, Inflation, 50% HHC, 50% ALF, SF U/W Partnership, 6 Mo BP, 30 Day EP, Inflation, 50% HHC, 50% ALF, LF U/W  | 622          | 702,279            |
| LTC1_P6M_LF               |  | 141          | 140,995            |
| LTC1_P6M_MGI              | Partnership, 6 Mo BP, 30 Day EP, Inflation, 50% HHC, 50% ALF, MGI U/W  | 21<br>11     | 11,317             |
| LTC1_P6M_SF<br>LTC2_C3_LF | Partnership, 6 Mo BP, 30 Day EP, Inflation, 50% HHC, 50% ALF, SF U/W Comprehensive, 3 Yr BP, 90 Day EP, No Inflation, 50% HHC, 70% ALF, LF U/W   | 666          | 6,987<br>1,034,840 |
| LTC2_C3_MGI               | Comprehensive, 3 Yr BP, 90 Day EP, No Inflation, 50% HHC, 70% ALF, MGI U/W - Conversions Comprehensive, 3 Yr BP, 90 Day EP, No Inflation, 50% HHC, 70% ALF, SF U/W - Conversions         | 8            | 10,723             |
| LTC2_C3_SF                |  | 7            | 8,160              |
| LTC2_C3i_LF               | Comprehensive, 3 Yr BP, 90 Day EP, Inflation, 50% HHC, 70% ALF, LF U/W Comprehensive, 3 Yr BP, 90 Day EP, Inflation, 50% HHC, 70% ALF, LF U/W - Conversions                              | 987          | 2,189,362          |
| LTC2_C3i_MGI              |  | 4            | 8,596              |
| LTC2_C3i_SF               | Comprehensive, 3 Yr BP, 90 Day EP, Inflation, 50% HHC, 70% ALF, MGI U/W - Conversions  | 5            | 12,755             |
| LTC2_C6_LF                | Comprehensive, 6 Yr BP, 90 Day EP, No Inflation, 50% HHC, 70% ALF, LF U/W Comprehensive, 6 Yr BP, 90 Day EP, No Inflation, 50% HHC, 70% ALF, MGI U/W                                     | 96           | 178,159            |
| LTC2_C6_MGI               |  | 2            | 2,415              |
| LTC2_C6i_LF               | Comprehensive, 6 Yr BP, 90 Day EP, Inflation, 50% HHC, 70% ALF, LF U/W Comprehensive, 6 Yr BP, 90 Day EP, Inflation, 50% HHC, 70% ALF, MGI U/W   | 140          | 396,691            |
| LTC2_C6i_MGI              |  | 1            | 3,680              |
| LTC2_C6i_SF               | Comprehensive, 6 Yr BP, 90 Day EP, Inflation, 50% HHC, 70% ALF, SF U/W Comprehensive, Lifetime BP, 90 Day EP, No Inflation, 50% HHC, 70% ALF, LF U/W                                     | 1            | 3,071              |
| LTC2_CL_LF                |  | 1,827        | 3,245,738          |
| LTC2_CL_MGI               | Comprehensive, Lifetime BP, 90 Day EP, No Inflation, 50% HHC, 70% ALF, MGI U/W - Conversions   | 23           | 51,995             |
| LTC2_CL_SF                | Comprehensive, Lifetime BP, 90 Day EP, No Inflation, 50% HHC, 70% ALF, SF U/W - Conversions Comprehensive, Lifetime BP, 90 Day EP, Inflation, 50% HHC, 70% ALF, LF U/W                   | 19           | 33,275             |
| LTC2_CLi_LF               |  | 3,740        | 11,664,909         |
| LTC2_CLi_MGI              | Comprehensive, Lifetime BP, 90 Day EP, Inflation, 50% HHC, 70% ALF, MGI U/W - Conversions Comprehensive, Lifetime BP, 90 Day EP, Inflation, 50% HHC, 70% ALF, SF U/W - Conversions       | 22           | 78,795             |
| LTC2_CLi_SF               |  | 28           | 97,109             |
| LTC2_N3_LF                | Facilities Only, 3 Yr BP, 90 Day EP, No Inflation, 70% ALF, LF U/W Facilities Only, 3 Yr BP, 90 Day EP, Inflation, 70% ALF, LF U/W   | 173          | 208,033            |
| LTC2_N3i_LF               |  | 164          | 298,790            |
| LTC2_N6_LF                | Facilities Only, 6 Yr BP, 90 Day EP, No Inflation, 70% ALF, LF U/W   | 33           | 50,892             |
| LTC2_N6i_LF               | Facilities Only, 6 Yr BP, 90 Day EP, Inflation, 70% ALF, LF U/W Facilities Only, Lifetime BP, 90 Day EP, No Inflation, 70% ALF, LF U/W   | 40           | 99,121             |
| LTC2_NL_LF                |  | 259          | 423,626            |
| LTC2_NLi_LF               | Facilities Only, Lifetime BP, 90 Day EP, Inflation, 70% ALF, LF U/W Facilities Only, Lifetime BP, 90 Day EP, Inflation, 70% ALF, MGI U/W - Conversions                                   | 548          | 1,276,620          |
| LTC2_NLi_MGI              |  | 2            | 8,173              |
| LTC2_NLi_SF               | Facilities Only, Lifetime BP, 90 Day EP, Inflation, 70% ALF, SF U/W - Conversions Partnership, 1 Yr BP, 30 Day EP, Inflation, 50% HHC, 70% ALF, LF U/W                                   | 1            | 2,281              |
| LTC2_P1_LF                |  | 91           | 118,511            |
| LTC2_P2_LF                | Partnership, 2 Yr BP, 30 Day EP, Inflation, 50% HHC, 70% ALF, LF U/W   | 173          | 354,702            |
| LTC2_P6M_LF               | Partnership, 6 Mo BP, 30 Day EP, Inflation, 50% HHC, 70% ALF, LF U/W Comprehensive, 3 Yr BP, 90 Day EP, No Inflation, 70% HHC, 70% ALF, LF U/W   | 11           | 12,358             |
| LTC3_C3_LF                |  | 819          | 1,120,854          |
| LTC3_C3_MGI               | Comprehensive, 3 Yr BP, 90 Day EP, No Inflation, 70% HHC, 70% ALF, MGI U/W - Conversions Comprehensive, 3 Yr BP, 90 Day EP, No Inflation, 70% HHC, 70% ALF, SF U/W - Conversions         | 63           | 59,168             |
| LTC3_C3_SF                |  | 47           | 31,197             |
| LTC3_C3i_LF               | Comprehensive, 3 Yr BP, 90 Day EP, Inflation, 70% HHC, 70% ALF, LF U/W   | 2,281        | 4,661,860          |
| LTC3_C3i_MGI              | Comprehensive, 3 Yr BP, 90 Day EP, Inflation, 70% HHC, 70% ALF, MGI U/W - Conversions  | 364          | 501,965            |
| LTC3_C3i_SF               | Comprehensive, 3 Yr BP, 90 Day EP, Inflation, 70% HHC, 70% ALF, SF U/W - Conversions   | 383          | 565,618            |
| LTC3_C6_LF                | Comprehensive, 6 Yr BP, 90 Day EP, No Inflation, 70% HHC, 70% ALF, LF U/W Comprehensive, 6 Yr BP, 90 Day EP, No Inflation, 70% HHC, 70% ALF, MGI U/W - Conversions                       | 2,787        | 4,710,706          |
| LTC3_C6_MGI               |  | 618          | 626,133            |
| LTC3_C6_SF                | Comprehensive, 6 Yr BP, 90 Day EP, No Inflation, 70% HHC, 70% ALF, SF U/W - Conversions Comprehensive, 6 Yr BP, 90 Day EP, Inflation, 70% HHC, 70% ALF, LF U/W                           | 473          | 513,108            |
| LTC3_C6i_LF               |  | 2,559        | 6,891,103          |
| LTC3_C6i_MGI              | Comprehensive, 6 Yr BP, 90 Day EP, Inflation, 70% HHC, 70% ALF, MGI U/W - Conversions Comprehensive, 6 Yr BP, 90 Day EP, Inflation, 70% HHC, 70% ALF, SF U/W - Conversions               | 479          | 955,861            |
| LTC3_C6i_SF               |  | 437          | 940,711            |
| LTC3_CL_LF                | Comprehensive, Lifetime BP, 90 Day EP, No Inflation, 70% HHC, 70% ALF, LF U/W  | 1,107        | 2,157,421          |
| LTC3_CL_MGI               | Comprehensive, Lifetime BP, 90 Day EP, No Inflation, 70% HHC, 70% ALF, MGI U/W - Conversions Comprehensive, Lifetime BP, 90 Day EP, No Inflation, 70% HHC, 70% ALF, SF U/W - Conversions | 16           | 36,794             |
| LTC3_CL_SF                |  | 10           | 17,208             |
| LTC3_CLi_LF               | Comprehensive, Lifetime BP, 90 Day EP, Inflation, 70% HHC, 70% ALF, LF U/W Comprehensive, Lifetime BP, 90 Day EP, Inflation, 70% HHC, 70% ALF, MGI U/W - Conversions                     | 1,248        | 4,603,833          |
| LTC3_CLi_MGI              |  | 8            | 45,812             |
| LTC3_CLi_SF<br>LTC3_N3_LF | Comprehensive, Lifetime BP, 90 Day EP, Inflation, 70% HHC, 70% ALF, SF U/W - Conversions   | 6            | 21,632             |
| LTC3_N3_MGI               | Facilities Only, 3 Yr BP, 90 Day EP, No Inflation, 70% ALF, LF U/W Facilities Only, 3 Yr BP, 90 Day EP, No Inflation, 70% ALF, MGI U/W - Conversions                                     | 330<br>17    | 430,897<br>13,060  |
| LTC3_N3_SF                | Facilities Only, 3 Yr BP, 90 Day EP, No Inflation, 70% ALF, SF U/W - Conversions Facilities Only, 3 Yr BP, 90 Day EP, Inflation, 70% ALF, LF U/W   | 21           | 12,700             |
| LTC3_N3i_LF               |  | 549          | 1,005,185          |
| LTC3_N3i_MGI              | Facilities Only, 3 Yr BP, 90 Day EP, Inflation, 70% ALF, MGI U/W - Conversions Facilities Only, 3 Yr BP, 90 Day EP, Inflation, 70% ALF, SF U/W - Conversions                             | 71           | 86,860             |
| LTC3_N3i_SF               |  | 118          | 155,726            |
| LTC3_N6_LF                | Facilities Only, 6 Yr BP, 90 Day EP, No Inflation, 70% ALF, LF U/W   | 806          | 1,218,163          |
| LTC3_N6_MGI               | Facilities Only, 6 Yr BP, 90 Day EP, No Inflation, 70% ALF, MGI U/W - Conversions Facilities Only, 6 Yr BP, 90 Day EP, No Inflation, 70% ALF, SF U/W - Conversions                       | 70           | 61,404             |
| LTC3_N6_SF                |  | 96           | 82,265             |
| LTC3_N6i_LF               | Facilities Only, 6 Yr BP, 90 Day EP, Inflation, 70% ALF, LF U/W Facilities Only, 6 Yr BP, 90 Day EP, Inflation, 70% ALF, MGI U/W - Conversions   | 207          | 503,091            |
| LTC3_N6i_MGI              |  | 17           | 34,077             |
| LTC3_N6i_SF               | Facilities Only, 6 Yr BP, 90 Day EP, Inflation, 70% ALF, SF U/W - Conversions Facilities Only, Lifetime BP, 90 Day EP, No Inflation, 70% ALF, LF U/W                                     | 24           | 47,223             |
| LTC3_NL_LF                |  | 158          | 243,540            |
| LTC3_NL_MGI               | Facilities Only, Lifetime BP, 90 Day EP, No Inflation, 70% ALF, MGI U/W - Conversions  | 1            | 4,259              |
| LTC3_NLi_LF               | Facilities Only, Lifetime BP, 90 Day EP, Inflation, 70% ALF, LF U/W Facilities Only, Lifetime BP, 90 Day EP, Inflation, 70% ALF, MGI U/W - Conversions                                   | 194          | 497,539            |
| LTC3_NLi_MGI              |  | 1            | 1,521              |
| LTC3_P1_LF                | Partnership, 1 Yr BP, 30 Day EP, Inflation, 70% ALF, LF U/W Partnership, 2 Yr BP, 30 Day EP, Inflation, 70% ALF, LF U/W  | 38           | 55,440             |
| LTC3_P2_LF                |  | 70           | 163,416            |
| Total                     | , , , , , , , , , , , , , , , , , , ,  | 154,634      | 332,263,869        |
| Abbreviation              | <u>Description</u>   |              |                    |
| BP<br>EP                  | Benefit Period<br>Elimination Period   |              |                    |
| A1.F                      | Assisted Living Codiller   |              |                    |

ALF HHC LF U/W MGI U/W SF U/W Assisted Living Facility Home Health Care

Long From Underwriting Modified Guaranteed Issue Underwriting Short Form Underwriting

# **Attachment F**

## CalPERS LTC Program Distributions of Business Inforce as of 6/30/2011

By Benefit Period and Elimination Period

| Benefit  | Elimination | 0       | B       |
|----------|-------------|---------|---------|
| Period   | Period      | Count   | Percent |
| 6 Month  | 30 Day      | 184     | 0%      |
| 1 Year   | 30 Day      | 2,252   | 1%      |
| 2 Year   | 30 Day      | 3,654   | 2%      |
| 3 Year   | 90 Day      | 32,452  | 21%     |
| 6 Year   | 90 Day      | 15,075  | 10%     |
| Lifetime | 90 Day      | 101,017 | 65%     |
| Total    | -           | 154,634 | 100%    |

| By Issue-Age Ba | nd and Gender | Average Iss | ue Age  | 56.4    |
|-----------------|---------------|-------------|---------|---------|
| Issue-Age Band  | Females       | Males       | Total   | Percent |
| < 30            | 471           | 263         | 734     | 0%      |
| 30-39           | 4,541         | 2,739       | 7,280   | 5%      |
| 40-44           | 6,167         | 3,415       | 9,582   | 6%      |
| 45-49           | 11,526        | 6,403       | 17,929  | 12%     |
| 50-54           | 17,331        | 10,440      | 27,771  | 18%     |
| 55-59           | 19,129        | 12,770      | 31,899  | 21%     |
| 60-64           | 15,665        | 12,115      | 27,780  | 18%     |
| 65-69           | 10,351        | 7,977       | 18,328  | 12%     |
| 70-74           | 5,792         | 3,600       | 9,392   | 6%      |
| 75-79           | 2,162         | 1,105       | 3,267   | 2%      |
| 80-84           | 438           | 172         | 610     | 0%      |
| 85-89           | 49            | 12          | 61      | 0%      |
| 90-94           |               | 1           | 1       | 0%      |
| <u>95+</u>      | -             | -           | -       | 0%      |
| Total           | 93,622        | 61,012      | 154,634 | 100%    |

| By Attained  | Age and Gender | Average Attai  | ned Age        | 67.8     |
|--------------|----------------|----------------|----------------|----------|
| Attained Age | <u>Females</u> | Males          | Total          | Percent  |
| 28           | -              | -              | -              | 0%       |
| 29           | 10             | 1              | 11             | 0%       |
| 30           | 7              | 4              | 11             | 0%       |
| 31           | 8              | 5              | 13             | 0%       |
| 32<br>33     | 13<br>17       | 6<br>11        | 19<br>28       | 0%<br>0% |
| 34           | 26             | 12             | 38             | 0%       |
| 35           | 64             | 38             | 102            | 0%       |
| 36           | 51             | 38             | 89             | 0%       |
| 37           | 60             | 33             | 93             | 0%       |
| 38           | 88             | 39             | 127            | 0%       |
| 39           | 86             | 57             | 143            | 0%       |
| 40           | 88             | 61             | 149            | 0%       |
| 41           | 131            | 85             | 216            | 0%       |
| 42           | 161            | 84             | 245            | 0%       |
| 43           | 224            | 160            | 384            | 0%       |
| 44           | 465            | 289            | 754            | 0%       |
| 45<br>46     | 546<br>483     | 339<br>297     | 885<br>780     | 1%<br>1% |
| 47           | 463<br>458     | 274            | 732            | 0%       |
| 48           | 444            | 307            | 751            | 0%       |
| 49           | 981            | 573            | 1,554          | 1%       |
| 50           | 1,590          | 879            | 2,469          | 2%       |
| 51           | 1,129          | 666            | 1,795          | 1%       |
| 52           | 765            | 458            | 1,223          | 1%       |
| 53           | 770            | 414            | 1,184          | 1%       |
| 54           | 1,112          | 607            | 1,719          | 1%       |
| 55           | 2,133          | 1,152          | 3,285          | 2%       |
| 56           | 2,477          | 1,346          | 3,823          | 2%       |
| 57           | 2,056          | 1,125          | 3,181          | 2%       |
| 58<br>59     | 1,453          | 792<br>1,073   | 2,245          | 1%       |
| 60           | 1,881<br>3,377 | 2,021          | 2,954<br>5,398 | 2%<br>3% |
| 61           | 4,414          | 2,621          | 7,035          | 5%       |
| 62           | 3,274          | 2,093          | 5,367          | 3%       |
| 63           | 2,150          | 1,359          | 3,509          | 2%       |
| 64           | 2,473          | 1,593          | 4,066          | 3%       |
| 65           | 4,713          | 2,937          | 7,650          | 5%       |
| 66           | 4,729          | 3,069          | 7,798          | 5%       |
| 67           | 3,573          | 2,336          | 5,909          | 4%       |
| 68           | 2,000          | 1,443          | 3,443          | 2%       |
| 69           | 2,327          | 1,657          | 3,984          | 3%       |
| 70<br>71     | 3,905<br>4,784 | 2,742<br>3,071 | 6,647<br>7,855 | 4%<br>5% |
| 72           | 3,074          | 2,110          | 5,184          | 3%       |
| 73           | 1,281          | 1,093          | 2,374          | 2%       |
| 74           | 1,679          | 1,346          | 3,025          | 2%       |
| 75           | 3,065          | 2,338          | 5,403          | 3%       |
| 76           | 3,866          | 2,920          | 6,786          | 4%       |
| 77           | 2,932          | 2,176          | 5,108          | 3%       |
| 78           | 706            | 577            | 1,283          | 1%       |
| 79           | 1,191          | 959            | 2,150          | 1%       |
| 80           | 2,247          | 1,672          | 3,919          | 3%       |
| 81<br>82     | 2,611<br>2,376 | 1,903<br>1,680 | 4,514          | 3%<br>3% |
| 82<br>83     | 2,376<br>426   | 261            | 4,056<br>687   | 3%<br>0% |
| 84           | 760            | 415            | 1,175          | 1%       |
| 85           | 1,315          | 755            | 2,070          | 1%       |
| 86           | 1,504          | 903            | 2,407          | 2%       |
| 87           | 1,182          | 776            | 1,958          | 1%       |
| 88           | 241            | 114            | 355            | 0%       |
| 89           | 277            | 133            | 410            | 0%       |
| 90           | 445            | 244            | 689            | 0%       |
| 91           | 419            | 222            | 641            | 0%       |
| 92           | 289            | 155            | 444            | 0%       |
| 93           | 53             | 20             | 73             | 0%       |
| 94           | 64             | 27             | 91             | 0%       |
| 95           | 57             | 14             | 71             | 0%       |
| 96           | 43             | 23             | 66             | 0%       |
| 97<br>98     | 6 2            | 1              | 6              | 0%<br>0% |
| 98           | 3              | 5              | 8              | 0%       |
| 100          | 4              | 2              | 6              | 0%       |
| 101          | 8              | 1              | 9              | 0%       |
| Total        | 93,622         | 61,012         | 154,634        | 100%     |
|              |                |                |                |          |

#### Attachment F

## CalPERS LTC Program Distributions of Business Inforce as of 6/30/2011

#### By Plan Type

| Plan Type                   | Count   | Percent |
|-----------------------------|---------|---------|
| Partnership (Comprehensive) | 6,090   | 4%      |
| Comprehensive               | 116,772 | 76%     |
| Facilities Only             | 31,772  | 21%     |
| Total                       | 154,634 | 100%    |

#### By Inflation

| <u>Inflation</u> | Count   | Percent |
|------------------|---------|---------|
| No Inflation     | 43,524  | 28%     |
| Inflation        | 111,110 | 72%     |
| Total            | 154,634 | 100%    |

#### By Marital Status at time of Issue

| Marital Status | Gender | Count   |
|----------------|--------|---------|
| Married        | F      | 56,923  |
| Married        | M      | 48,371  |
| Divorced       | F      | 12,861  |
| Divorced       | M      | 3,618   |
| Single         | F      | 10,788  |
| Single         | M      | 5,260   |
| Widowed        | F      | 12,414  |
| Widowed        | M      | 2,895   |
| Unknown        | F      | 629     |
| Unknown        | M      | 862     |
| Separated      | F      | 7       |
| Separated      | M      | 6       |
| Total          |        | 154.634 |

# Marital Status 0ther 49,340 32% Total 154,634 100%

#### By Premium Mode

| Premium Mode  | Count   |      |
|---------------|---------|------|
| Monthly       | 117,905 | 76%  |
| Quarterly     | 28,379  | 18%  |
| Semi-Annually | 4,880   | 3%   |
| Annually      | 3,470   | 2%   |
| Total         | 154.634 | 100% |

#### By Underwriting Type

| Underwriting Type | Count   |      |
|-------------------|---------|------|
| LF                | 96,709  | 63%  |
| MGI               | 31,573  | 20%  |
| SF                | 26,352  | 17%  |
| Total             | 154 634 | 100% |

#### By Product Series

| Product Series | Count   |      |
|----------------|---------|------|
| LTC 1          | 129,070 | 83%  |
| LTC 2          | 9,071   | 6%   |
| LTC 3          | 16,493  | 11%  |
| Total          | 154 634 | 100% |

# Attachment G

## Attachment G Base Case

#### **California Public Employees Retirement System**

Summary of Projected Values
All Plans

Annual

Discount Rate Years 1 - 10: 6.25% LTC Program Funded Ratio: 127.20% Discount Rate Years 11+: 7.60% Surplus/(Deficit) \$ = PV (Fund Balance + Earnings): 700,742,636 = Standard Program Definition Surplus/(Deficit) \$ as a Percentage of PV(Premiums) 23.14% = Standard Program Definition Fund Balance @ Fnd of Projection: 49.493.046.394 100.00% 100.00% Totals - 7/2011 thru 6/2071: 5.545.681.269 19.529.919.673 90.896.489 750.438.987 (14.825.573.880) 61,041,835,453 As a % of Premiums: 100.00% 352.16% 1.64% 13.53% -267.34% 1100.71% Totals - Present Values: 3,028,780,651 5,256,373,930 58,838,801 289,610,105 (2,576,042,185) 7,013,761,458 As a % of PV(Premiums): 100.00% 173.55% 1.94% 9.56% -85.05% 231.57% Months Year Lives Total Premiums LTC Paid Claims RoP Claims Total Expenses **Earnings** Investment Earnings Fund Balance 3.276.784.822 7-12 2011 152,290 163,214,995 86,518,260 3,387,165 8,981,681 64,327,889 102,145,483 3,443,258,194 1-12 2012 147,709 319,059,141 189,064,343 6,895,002 18,148,098 104,951,698 219,154,237 3,767,364,129 143,043 310,506,451 213,621,901 7,167,348 18,746,908 70,970,294 238,408,258 4,076,742,681 1-12 2013 1-12 2014 138,324 301,716,982 235,804,779 7,218,240 19,383,443 39,310,519 256,670,452 4,372,723,653 1-12 2015 133.569 292.812.777 252,377,141 6,975,166 20,045,063 13,415,407 274.366.302 4.660.505.363 (15 217 569) 291 470 022 4 936 757 816 1-12 2016 128 772 283.662.504 271.464.517 6.685.429 20 730 126 123.912 274.128.945 291.313.450 6.346.259 21.274.336 (44.805.099) 307.796.860 5.199.749.577 2017 1-12 1-12 2018 118,985 264,230,361 309,404,757 5,893,779 21,763,059 (72,831,233) 323,339,651 5,450,257,995 1-12 2019 114.031 254.007.602 326,727,442 5.344.120 22,208,604 (100,272,564) 338.139.143 5,688,124,575 109,076 243,443,552 343,459,398 4,812,904 22,630,437 (127,459,187) 352,116,421 5,912,781,808 1-12 2020 1-12 2021 104.128 232.599.901 357,608,875 4,330,873 23.046.183 (152.386.030) 404.448.471 6,164,844,249 1-12 2022 99,172 221,541,618 373,880,074 3,887,360 23,412,613 (179,638,430) 462,466,712 6,447,672,531 1-12 2023 94.202 210.311.139 393.964.804 3.405.930 23.700.092 (210.759.687) 482.785.786 6.719.698.630 6,980,031,740 414.108.559 (241.932.180) 199.001.068 2.918.933 23.905.755 502.265.290 1-12 2024 89.249 (274,541,782) 84,345 187,658,130 435,644,456 2,507,685 24,047,771 1-12 2025 520,822,194 7,226,312,152 1-12 2026 79.502 176,331,779 459,722,190 2,180,288 24,141,270 (309,711,968) 538,211,128 7,454,811,312 165,080,604 483,751,478 1,906,328 24,152,780 (344,729,982) 554,228,751 7,664,310,081 1-12 2027 74,710 2028 69,968 153,956,756 504,626,657 1,631,506 24,045,434 (376,346,841) 568,915,249 7,856,878,488 1-12 1-12 2029 65,294 142,987,659 521,966,548 1,364,822 23,812,655 (404,156,366) 582.462.629 8,035,184,752 1-12 2030 60.718 132.203.311 539 004 799 1.135.750 23,470,506 (431 407 744) 594 973 543 8.198.750.550 23.058.064 1-12 2031 56.254 121.641.574 558.280.229 951,176 (460.647.895) 606.305.326 8.344.407.981 111,327,765 51,885 577,770,778 815,223 22,660,699 (489,918,935) 616,227,053 8,470,716,099 1-12 2032 22,142,029 1-12 2033 47.618 101,314,984 591,395,682 685,794 (512,908,521) 624,901,005 8,582,708,583 1-12 2034 43,471 91,646,420 599,727,318 556,720 21,476,888 (530,114,506) 632,711,914 8,685,305,991 39,474 606,614,417 435,286 20,682,434 (545,391,847) 8,779,826,349 1-12 2035 82,340,290 639,912,205 1-12 2036 35,657 73,479,687 614,058,683 337,397 19,792,076 (560,708,468) 646,498,471 8,865,616,351 1-12 2037 32.030 65,124,492 618.983.471 268,664 18.825.823 (572.953.466) 652.506.608 8,945,169,493 9.027,321,753 1-12 2038 28.595 57.322.422 615.518.913 214.154 17,781,528 (576, 192, 173) 658.344.433 9,121,362,413 603,959,865 165,968 16,651,118 (570,690,864) 1-12 2039 25,365 50,086,087 664,731,524 43,432,755 589,474,789 123,600 15,462,962 (561,628,596) 672,192,687 9,231,926,503 1-12 2040 22.364 1-12 2041 19,607 37.389.850 574,966,945 89,744 14,265,872 (551,932,712) 680,940,666 9,360,934,457 1-12 2042 17.091 31,962,611 557,053,936 65,926 13,093,630 (538,250,881) 691,207,641 9,513,891,218 1-12 2043 14,806 27,134,548 531,609,781 50,599 11,943,747 (516,469,579) 703.582.502 9,701,004,140 1-12 2044 12.745 22,874,351 500.375.134 38.684 10.805.046 (488,344,513) 718.819.416 9 931 479 044 10,210,000.935 (458 912 303) 1-12 2045 10 905 19 145 498 468.334.699 29 746 9 693 356 737 434 194 22,303 (430,858,631) 10,538,799,321 2046 9.279 15.914.975 438.114.684 8.636.619 759,657,017 1-12 408,476,443 (403,008,274) 785,679,064 10,921,470,111 1-12 2047 7.851 13.138.654 16.273 7.654.212 1-12 2048 6,605 10,774,947 376,289,127 11,797 6,753,998 (372,279,974) 815,886,389 11,365,076,526 (339,568,113) 11,876,326,380 1-12 2049 5,521 8,777,852 342,413,795 8,319 5,923,852 850,817,968 1-12 2050 4,584 7,098,066 309,513,714 5,547 5,157,676 (307,578,872) 890,879,863 12,459,627,372 1-12 2051 3,782 5,695,635 279,384,459 3,549 4,452,864 (278,145,237) 936,331,028 13,117,813,163 (251,999,384) 1-12 2052 3,100 4,533,153 252,715,908 2.359 3,814,271 987,350,815 13,853,164,594 1-12 2053 2 5 2 4 3 577 784 226 780 559 1 467 3 249 204 (226 453 446) 1 044 189 909 14.670.901.057 15,577,684,841 2054 2.042 2.800.123 200.575.200 833 2.749.026 (200.524.936) 1.107.308.721 1-12 16,579,183,902 1-12 2055 1,639 2,171,711 175,529,878 385 2,308,856 (175,667,409) 1,177,166,469 1,254,147,902 17,680,428,324 1-12 2056 1.306 1,667,816 152,646,166 89 1.925.041 (152.903.480) 1-12 2057 1,033 1,267,848 132,205,250 1,592,690 (132,530,092) 1,338,621,016 18,886,519,248 1-12 2058 811 953.971 113.791.169 1.307.841 (114,145,038) 1.430.983.826 20.203.358.035 1-12 2059 633 710,557 96,592,605 1,065,999 (96,948,047) 1,531,714,628 21,638,124,616 1-12 2060 491 528.268 81,007,025 861.999 (81.340.757) 1,641,354,517 23.198.138.376 2061 378 393.029 67.534.843 692.124 (67.833.938) 1.760.435.473 24.890.739.910 1-12 1-12 2062 289 290,229 56,060,128 552,562 (56,322,462) 1,889,516,725 26,723,934,173 1-12 2063 220 212,735 46,332,471 438,570 (46,558,306) 2,029,216,000 28,706,591,867 1-12 2064 166 154,715 38,160,569 345,995 (38,351,849) 2,180,215,031 30,848,455,049 1-12 2065 125 111,585 31,339,195 271,479 (31,499,089) 2,343,261,515 33,160,217,475 1-12 2066 93 79.863 25,632,598 211,790 (25,764,525) 2.519.176.995 35,653,629,946 1-12 2067 69 56.654 20 924 166 164,111 (21.031.622) 2.708.859.780 38.341.458.104 16.942.992 (17.029.804) 41.237.716.941 51 39.726 126,538 2.913.288.641 1-12 2068 1-12 2069 37 27,430 13,560,292 96,768 (13,629,631) 3,133,535,539 44,357,622,849 1-12 2070 27 18,592 10,752,486 73,166 (10,807,059) 3,370,757,766 47,717,573,555 23 4,484,883 (4,507,793)1,779,980,632 49,493,046,394 1-6 2071 6.742 29.652

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8/31/2011 Attachment G

# **Attachment H**

#### Attachment H

No Credibility

#### California Public Employees Retirement System

Summary of Projected Values All Plans

<u>Annual</u> Discount Rate Years 1 - 10: 6.25% LTC Program Funded Ratio: 136.31% Discount Rate Years 11+: 7.60% Surplus/(Deficit) \$ = PV (Fund Balance + Farnings) = Standard Program Definition 872,921,884 Surplus/(Deficit) \$ as a Percentage of PV(Premiums): 28.77% = Standard Program Definition Fund Balance @ End of Projection: 61.827.139.214 100.00% 100.00% Totals - 7/2011 thru 6/2071: (14,356,060,706) 72,906,415,098 5.557.483.378 19.085.254.327 90.896.489 737.393.268 100.00% 343.42% As a % of Premiums 1.64% 13.27% -258.32% 1311.86% Totals - Present Values: 3,033,842,522 5,096,847,331 282,019,328 (2,403,862,937) 7,609,809,544 58,838,801 As a % of PV(Premiums): 100.00% 168.00% 1.94% 9.30% -79.23% 250.83% Months Year Lives Total Premiums LTC Paid Claims RoP Claims Total Expenses Earnings Investment Earnings Fund Balance 3,276,784,822 3,443,782,485 7-12 2011 152,290 163,222,182 86,410,032 3,387,165 8,579,537 64,845,448 102,152,215 2012 17,350,424 17,955,385 147,709 319,189,663 186,987,722 6,895,002 107,956,516 219,266,516 3,771,005,517 1-12 208.975.591 7.167.348 76,661,093 1-12 2013 143.043 310.759.417 238.798.488 4.086.465.098 1-12 2014 138,324 302,055,988 228,736,242 7,218,240 18,596,075 47,505,432 257,520,832 4,391,491,361 1-12 2015 133.569 293.220.465 243,096,597 260,085,055 6.975.166 19.261.479 23.887.224 275.852.665 4.691.231.251 6,685,429 19,956,799 4,982,401,878 (2,600,959) 1-12 2016 128.772 284.126.325 293.771.586 278,144,823 274,631,695 6,346,259 20,523,926 (30,383,313) 311,088,904 5,263,107,470 1-12 2017 123,912 1-12 2018 118.985 264.753.838 294.859.895 5.893.779 21.040.002 (57.039.838) 327.783.717 5.533.851.348 254,536,312 311,233,931 343,878,679 1-12 2019 114,031 5,344,120 21,519,359 (83,561,099) 5,794,168,929 1-12 2020 109,076 243.972.258 327,234,327 4,812,904 21,978,120 (110,053,094) 359,281,347 6,043,397,182 340.762.358 22,433,990 1-12 2021 104.128 233.127.063 4.330.873 (134,400,158) 414.135.257 6.323.132.280 222,061,924 356,614,401 22,850,070 (161,289,908) 475,186,553 6,637,028,926 2022 3,887,360 1-12 2023 94,202 210.814.629 376.638.458 3.405.930 23.189.585 (192,419,344) 497.869.073 6.942.478.654 199,479,924 397,088,141 2,918,933 23,441,886 (223,969,037) 519,876,555 2024 89,249 7,238,386,173 1-12 1-12 2025 84,345 188,113,644 419,042,690 2,507,685 23,623,198 (257,059,929) 541,118,861 7,522,445,104 1-12 2026 79,502 176.768.305 443.485.224 2.180.288 23.749.818 (292.647.024) 561.362.807 7.791.160.887 467,870,535 2027 165,499,332 1,906,328 23,794,522 (328,072,053) 580,421,772 8.043.510.606 1-12 2028 69.968 154 353 861 489.216.828 1.631.506 23.719.375 (360.213.849) 598.346.159 8.281.642.916 507,173,393 (388,695,926) 143,358,849 8,508,278,730 65,294 23,516,560 615,331,739 1-12 2029 1,364,822 60,718 132,551,284 524,775,593 1,135,750 23,197,673 (416,557,732) 631,491,692 8,723,212,691 1-12 2030 1-12 2031 56 254 121 972 078 544 478 131 951 176 22 803 185 (446 260 415) 646 709 170 8 923 661 446 1-12 2032 51,885 111,644,662 564,304,617 815,223 22,424,388 (475,899,566) 660,780,775 9,108,542,655 1-12 2033 47,618 101.617.081 578.306.842 685.794 21,928,895 (499,304,450) 673,891,295 9.283.129.500 1-12 2034 43,471 91,930,669 587,154,512 556,720 21,289,180 (517,069,743) 686,439,153 9,452,498,910 2035 39,474 82,607,714 594,583,104 435,286 20,517,608 (532,928,285) 698,691,921 9,618,262,546 1-12 1-12 2036 35 657 73.732.100 602.546.639 337 397 19 648 225 (548.800.162) 710 671 691 9.780.134.075 65,361,830 608,015,524 18,706,980 (561,629,337) 722,440,362 9,940,945,100 2037 32,030 268,664 1-12 1-12 2038 28,595 57,542,227 605,173,938 214.154 17.689.166 (565,535,031) 734,429,231 10,109,839,300 50.286.048 165.968 16.580.585 747.379.594 1-12 2039 25.365 594.366.144 (560.826.649) 10.296.392.245 43,612,711 580,679,138 123,600 15,408,109 (552,598,135) 10,505,634,330 2040 22,364 761,840,221 89,744 65,926 14,221,549 13,058,574 1-12 2041 19,607 37 550 351 566,969,682 (543.730.624) 778,056,460 10.739.960.166 549,811,430 32,104,291 796,297,694 11,005,426,221 1-12 2042 17,091 (530,831,640) 1-12 2043 14.806 27,257,710 525,027,117 50.599 11.917.886 (509,737,893) 817,196,704 11.312.885.033 841.555.502 1-12 2044 12.745 22.979.496 494.411.837 38.684 10.789.184 (482.260.209) 11.672.180.325 10,905 19,233,855 1-12 2045 463,000,990 29,746 9,687,218 (453,484,098) 869,935,965 12,088,632,192 1-12 2046 9.279 15.988.498 433,413,140 22,303 8.634.610 (426.081.555) 902.616.820 12,565,167,457 13,200,038 1-12 2047 7.851 404.349.414 16.273 7.652.804 (398.818.453) 939.844.180 13.106.193.184 1-12 2048 10,826,778 372,594,520 11,797 6,752,000 (368,531,538) 982,068,832 13,719,730,478 6,605 1-12 2049 5.521 8.821.816 339.067.944 8.319 5.921.194 (336.175.641) 1.029.901.500 14.413.456.337 5,155,019 2050 4,584 7,135,292 306,501,484 5,547 (304,526,757) 1,083,818,720 15,192,748,299 1-12 1-12 2051 3,782 5,727,213 276,700,331 3,549 4,449,922 (275,426,588) 1,144,152,585 16,061,474,296 250.349.875 3.810.876 1.211.161.185 1-12 2052 3.100 4.560.225 2.359 (249.602.885) 17.023.032.596 224,678,818 3,245,763 (224,324,841) 18,083,889,218 2053 2,524 3,601,207 1,467 1,285,181,464 1-12 2054 2.042 2,820,393 198,669,775 833 2,746,100 (198,596,314) 1,366,769,479 1,456,486,472 19,252,062,383 2055 2,189,152 173,786,390 2,306,855 (173,904,479) 20,534,644,377 1-12 1,639 385 ,682,541 151,062,948 1,924,503 (151,304,999) 1,554,824,053 21,938,163,431 1-12 2056 1,306 89 1-12 2057 1.033 1.279.948 130.790.306 1.593.343 (131,103,701) 1.662.263.607 23,469,323,338 1-12 2058 811 963,621 112,546,929 1,309,306 (112,892,615) 1,779,325,096 25,135,755,820 633 491 1\_12 2059 718.030 95.502.443 1,068,036 (95,852,449) 1,906,618,980 26.946.522.352 80,062,220 28,910,958,967 2,044,829,276 1-12 2060 533,902 864,343 (80,392,660) 397,128 66,738,166 694,435 (67,035,473) 2,194,640,781 31,038,564,275 1-12 2061 378 1-12 2062 289 293,100 55,408,899 554.513 (55.670.312) 2.356.776.766 33.339.670.729 2063 220 214,703 45,809,019 439.974 (46.034.290) 2,532,032,410 35,825,668,849 1-12 2064 166 156,072 37,742,311 346,809 (37,933,048) 2,721,281,218 38,509,017,020 125 112,549 31,003,475 (31,162,754) 2,925,477,324 41,403,331,589 1-12 2065 271,828 2066 93 80,576 25,357,946 211.833 (25,489,204) 3,145,664,349 44,523,506,735 1-12 2067 69 57 203 20 694 802 164 040 (20.801.639) 3 382 979 311 47 885 684 407 51 (16,831,846) 3,638,657,454 51,507,510,014 2068 40,158 16,745,502 126,503 1-12 37 27 27,770 13,388,591 96,883 (13,457,704) 3,914,046,433 55,408,098,743 1-12 2069 10.606.188 4.210.599.593 1-12 2070 18.846 73.451 (10.660.794)59.608.037.543 1-6 2071 23 6.839 4.421.409 29.813 (4.444.383) 2.223.546.054 61.827.139.214

# **Attachment I**

#### Attachment I

Full Credibility

#### California Public Employees Retirement System

Summary of Projected Values All Plans

<u>Annual</u> Discount Rate Years 1 - 10: 6.25% LTC Program Funded Ratio: 122.23% Discount Rate Years 11+: 7.60% Surplus/(Deficit) \$ = PV (Fund Balance + Farnings): = Standard Program Definition 596.003.539 Surplus/(Deficit) \$ as a Percentage of PV(Premiums): 19.70% = Standard Program Definition Fund Balance @ End of Projection: 41.989.694.141 100.00% 100.00% Totals - 7/2011 thru 6/2071: (15,173,635,361) 5.538.018.485 19.860.795.830 90.896.489 759.961.527 53.886.544.680 -273.99% As a % of Premiums 100.00% 358.63% 1.64% 13.72% 973.03% Totals - Present Values: 3,025,734,373 5,353,862,378 293,814,477 (2,680,781,282) 6,666,372,985 58,838,801 As a % of PV(Premiums): 100.00% 176.94% 1.94% 9.71% -88.60% 220.32% Months Year Lives Total Premiums LTC Paid Claims RoP Claims Total Expenses Earnings Investment Earnings Fund Balance 3,276,784,822 3,443,049,333 7-12 2011 152,290 163,211,068 86,567,015 3,387,165 9,135,259 64,121,629 102,142,882 2012 318,986,122 310,364,760 147,709 190,028,193 6,895,002 18,456,039 103,606,888 219,106,006 3,765,762,226 1-12 215.775.349 7.167.348 19.059.897 4.072.358.204 1-12 2013 143.043 68.362.165 238.233.812 1-12 2014 138,324 301,527,863 239,071,937 7,218,240 19,703,215 35,534,471 256,284,803 4,364,177,478 1-12 2015 133.569 292.585.956 256,712,140 6.975.166 20,376,942 21,075,473 8.521.708 273,686,320 4.646.385.506 276,889,339 6,685,429 4,915,545,393 283,403,822 1-12 2016 128.772 (21,246,420) 290,406,307 273,846,615 297,737,137 6,346,259 21,626,042 (51,862,823) 306,257,180 5,169,939,749 1-12 2017 1-12 2018 118.985 263.934.099 316.659.877 5.893.779 22.115.181 (80.734.737) 321.235.355 5.410.440.367 253,706,459 22,559,036 (108,816,782) 335,388,537 1-12 2019 114,031 334,620,084 5,344,120 5,637,012,122 1-12 2020 109,076 243.139.891 351,937,924 4,812,904 22,981,734 (136,592,671) 348,641,731 5,849,061,183 366.675.597 23.399.938 1-12 2021 104.128 232.293.594 4.330.873 (162,112,814) 399.690.848 6.086.639.216 456,140,581 221,234,678 383,465,381 23,762,341 (189,880,404) 6,352,899,393 2022 3,887,360 1-12 2023 94,202 210.009.140 403.881.751 3.405.930 24.039.001 (221.317.543) 475.187.116 6.606.768.967 198,710,183 424,136,577 2,918,933 (252,578,716) 493,282,179 6,847,472,429 2024 89,249 24,233,389 1-12 1-12 2025 84,345 187,378,338 445,746,328 2,507,685 24,368,263 (285,243,938) 510,345,510 7,072,574,001 469.960.393 7.278.155.608 1-12 2026 79,502 176.060.560 2.180.288 24.458.873 (320.538.993) 526.120.600 7,462,854,336 2027 164,816,591 494,137,306 1,906,328 24,465,405 (355,692,447) 540,391,176 (387,323,216) (414,993,590) 553,191,331 564,713,980 1-12 2028 69.968 153.702.198 515.045.921 1.631.506 24 347 987 7.628.722.451 532,270,549 65,294 142,745,906 24,104,125 7,778,442,842 1-12 2029 1,364,822 60,718 131,973,101 549,215,366 1,135,750 23,753,174 (442,131,190) 575,057,321 7,911,368,973 1-12 2030 1-12 2031 56 254 121 419 924 568 492 761 951 176 23 335 606 (471 359 619) 584 061 582 8 024 070 936 1-12 2032 51,885 111,112,029 588,049,524 815,223 22,933,204 (500,685,922) 591,476,844 8,114,861,858 1-12 2033 47,618 101,105,787 601,677,475 685.794 22.403.073 (523,660,555) 597.451.260 8.188.652.563 1-12 2034 43,471 91,446,527 609,874,145 556,720 21,722,587 (540,706,926) 602,364,018 8,250,309,655 2035 39,474 82,149,485 616,612,403 435,286 20,910,461 (555,808,665) 606,459,709 8,300,960,699 1-12 1-12 2036 35 657 73.297.395 623 911 317 337 397 20 003 446 (570 954 765) 609.718.305 8 339 724 238 64,950,270 612,159,218 628,674,250 19,020,448 (583,013,092) 8,368,870,364 2037 32,030 268,664 1-12 1-12 2038 28,595 57,157,642 624,927,575 214.154 17,958,468 (585,942,555) 614,176,793 8,397,104,603 612.954.369 16.812.536 (580,000,552) 8.433.586.091 1-12 2039 25.365 49.932.321 165.968 616.482.040 43,289,971 598,044,791 123,600 15,604,645 (570,483,065) 619,585,936 8,482,688,962 2040 22,364 89,744 65,926 623,681,307 628,981,686 1-12 2041 19,607 37.259.068 583.068.473 14.387.705 (560.286.856) 8.546.083.413 31,844,208 (546,068,781) 564,646,716 13,200,347 8,628,996,318 1-12 2042 17,091 1-12 2043 14.806 27.028.569 538,668,112 50.599 12,039,370 (523,729,513) 636,054,150 8.741.320.955 1-12 2044 12.745 22.780.566 506.905.780 38.684 10.893.354 (495.057.253) 645.627.881 8.891.891.583 1-12 2045 10,905 19,063,340 474,393,699 29,746 9,769,430 (465,129,536) 658,188,850 9,084,950,897 1-12 2046 9.279 15.844.335 443.682.959 22,303 8,699,698 7,709,451 (436.560.624) 673,935,667 9.322.325.940 413,556,358 9.607.151.165 1-12 2047 7.851 13.078.510 16.273 (408.203.571) 693.028.797 1-12 2048 10,723,809 380,921,982 11,797 6,804,681 (377,014,651) 715,817,546 9,945,954,060 6,605 1-12 2049 5.521 8.734.325 346.650.440 8.319 5.972.060 (343.896.493) 742.799.623 10.344.857.190 774,337,239 2050 4,584 7,060,985 313,391,816 5,547 5,199,423 (311,535,801) 10,807,658,628 1-12 1-12 2051 3,782 5,664,313 282,895,372 255,867,917 3,549 4,486,991 (281,721,599) 810,644,653 11,336,581,682 4.506.647 3.843.525 (255,207,153) 851.854.496 1-12 2052 3.100 2.359 11.933.229.024 3,555,075 229,607,103 3,275,647 (229,329,142) 898,164,840 12,602,064,722 2053 1,467 1-12 2054 2.042 2.780.507 203,123,397 833 2,774,323 (203,118,046) 949.978.128 13,348,924,804 2055 2,154,710 177,841,152 2,331,577 (178,018,405) 1,007,690,954 14,178,597,353 1-12 1,639 385 1,653,203 154,730,934 1,943,299 (155,021,119) 1,071,622,335 15,095,198,569 1-12 2056 1,306 89 1-12 2057 1.033 1.255.521 134.062.271 1.607.215 (134,413,965) 1.142.071.365 16.102.855.968 1-12 2058 811 943,750 115,428,177 1,319,978 (115,804,405) 1,219,361,756 17,206,413,319 633 491 1\_12 2059 702,166 98,036,153 1,076,376 (98.410.363) 1,303,890,772 18,411,893,728 19,725,375,333 1,396,111,540 1-12 2060 521,427 82,280,619 870,743 (82,629,935) 387,595 68,648,884 698,990 (68,960,279) 1,496,462,187 21,152,877,242 1-12 2061 378 1-12 2062 289 286.089 57.013.431 557,492 (57.284.834) 1.605.402.010 22.700.994.418 2063 220 209,688 47,127,674 442.066 (47,360,052 1,723,441,502 24,377,075,867 1-12 2064 166 152,530 38,807,515 31,858,279 348,630 (39,003,614) 1,851,146,456 26,189,218,709 125 110,027 (32,021,928) 1,989,139,188 28,146,335,969 1-12 2065 273,676 2066 93 78,727 26,048,581 213.678 (26,183,531) 2,138,105,688 30,258,258,126 (21,369,373) (17,306,169) 1-12 2067 69 55 799 21,259,427 165 745 2 298 798 391 32 535 687 145 51 39,062 17,217,243 127,988 2,472,039,338 34,990,420,313 2068 1-12 37 27 26,901 13,788,661 98,063 (13,859,824) 2,658,732,097 37,635,292,587 1-12 2069 2.859.853.181 40.484.144.931 1-12 2070 18.171 10.944.833 74.175 (11.000.837) 1-6 2071 23 6.568 4.569.095 30.042 (4.592.570) 1.510.141.780 41.989.694.141